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ART. I.—*Surgical Essays.* By Baron D. J. LARREY, Surgeon in Chief of the Hospital of the Royal Guard, First Surgeon of the Grand Army in Russia, Saxony, &c. &c. Translated from the French, by JOHN REVERE, M. D. Baltimore, 1823. Octavo, pp. 336.

NAPOLEON had so wonderfully excited the attention of mankind, that every circumstance connected with his death, as well as those which are recorded respecting his early life, is now viewed with an interest as deep as it is extended. It is not surprising, therefore, that the surgeon whom he especially honoured in all his great campaigns, has acquired much celebrity; or that the same person, whom, in his last will and testament, he pronounced "the most honest man alive," should come before the public with a strong claim to its confidence.

Long before the publication of the present work, Baron Larrey had been extensively known from the circulation of his "Military Campaigns." Although the marvellous cases, with which they abounded, were calculated to excite some degree of suspicion, nevertheless, the fearless manner in which all his statements were detailed, and the bold appeals which he constantly made to the testimony of his colleagues, enforced a general conviction in favour of his authority.

The remarkable attention which his numerous contributions to the *Dict. des Sciences Medicales*, and other periodical works, have invariably received, also attests the high degree of confidence with which his remarks are estimated by his brethren. Indeed no man can now be considered as occupying higher ground in the profession than this veteran practitioner. His opinions must, therefore, be regarded with deference, while his experience cannot fail to be esteemed as authoritative.

But, in attending to the claims of this so much celebrated author, we must not overlook the merits of his translator. To Dr. Revere, our medical brethren are greatly indebted for the pains he has taken to present them with a correct and elegant version of the "Surgical Essays." The original work is certainly one of the most important productions of modern surgery, and the translation is perspicuous and accurate, at the same time that it strictly preserves the spirit of the author.

But we have said enough concerning the general character of this publication, as well as of the degree of credit which should be attached to its details. We will proceed, therefore, to analyze the subjects of which it treats in the order in which they occur—not doubting that they will prove sufficiently instructive to repay whatever attention may be bestowed upon them.

The volume is composed of six different essays. The first of these treats of *the use of Moxa* in various functional and organic diseases; the second of *the seat and effects of nostalgia;* the third of *the properties of the Iris;* the fourth of *wounds of the intestines;* the fifth of *fractures of the neck of the femur;* and the sixth *on wounds of the bladder, and upon certain foreign bodies remaining in that viscus.*

The essay upon the use of Moxa contains the most practical and novel information. In this country that "heroic remedy" has, as yet, hardly been known to the profession. The slender accounts which were formerly received from those who had visited the Parisian Hospitals, were of so

discouraging and frightful a nature, that no one could summon resolution enough to give the remedy a trial. A late teacher in this city, used to relate to his class, that he had seen the celebrated Dubois sear the cheeks of a venerable old man until the fat ran down in streams to his very knees. Whether any representation of this kind influenced the practitioners of other countries or not, it is impossible to determine; but it is certain, that the use of the Moxa was chiefly confined, until a very recent period, to the hands of a few French Surgeons. It is now almost unnecessary to state, that the painful effects of the remedy have been greatly exaggerated by such reports; and that while our physicians continue to be prejudiced by them, they will be obnoxious to the charge of refusing to their patients one of the most efficient means of combating disease.

The term *Moxa*, is said to have been derived from the Japanese name of a lanuginous plant, the down of which is collected and rolled into small cones for the purpose of being applied, in a state of combustion, to the surface of the body. In India, a similar production was formerly gathered from several different plants; and spider's-webs have also been used for the same purpose. No peculiar virtue, however, can be ascribed to either of the articles thus employed. It is probable that any inflammable substance will prove as useful, provided it be light, and capable of exciting much flame. Baron Larrey has been in the habit of employing carded cotton, rolled up into cylinders, and sewed in small pieces of fine linen. These are applied to the skin by means of a small instrument, called the *porte moxa*, which is merely a metallic ring, supported on three little ebony balls, and attached to a handle. The balls, being nonconductors of caloric, and separating the metal a few lines from the skin, prevent the heated instrument from exciting unnecessary pain, while the combustion operates immediately on the subjacent part.

Before using the moxa, the part where the application is to be made is marked with ink. A wet cloth is then placed over the surrounding parts, to protect them from the flame.

"After applying the fire to the apex of the moxa, it is then to be fixed on the point marked out, and by means of the *porte moxa* retained in its situation, while with the blow pipe the combustion is kept up until the whole be consumed. To prevent deep inflammation and profuse suppuration, which would be the result, it is necessary immediately afterwards to apply on the point the volatile alkali."

The introduction of the blow-pipe Baron Larrey claims for himself, as a most important addition to the former method of performing the operation. Without it, indeed, the moxa produces comparatively but superficial and insignificant effects.

The employment of volatile alkali, also, to moderate the severe effects of the remedy, appears to be original with our author. As the oil of turpentine has been found so useful a remedy in common burns, we can have no difficulty in conceiving how the ammonia may prove beneficial after the application of a moxa. The stimulating powers of this article prevent sloughing and suppuration, by re-exciting the exhausted capillaries, in the same manner as we remove indirect debility of the general system, by various modes of excitation.

The employment of ammonia, after applying the moxa, is also attended with another important advantage, which is incidentally mentioned in several parts of the book. It immediately removes pain. To such a degree is this the case, that a repetition of the operation in a great measure ceases to become formidable to the patient. This corresponds with our own experience in the use of the remedy. We have not found, however, that ammonia, in every case, prevents suppuration; although in a majority of instances it has caused the inflammation to terminate in the formation of a scab. It is necessary, in order to produce these effects, that the volatile alkali should be strong, and in the form of pure *aq. ammoniæ* of the shops.

From these circumstances it has occurred to us, that ammonia would form an excellent application to common burns. We have tried it in three different cases, and its effects were so favourable as to induce us to believe that it will eventually

supersede the turpentine and other stimulating remedies, which are usually resorted to on such occasions.

The method which we have adopted in applying the moxa, is much more simple than that which Larrey details. With a pair of scissors a small hole, from half an inch to an inch in diameter, is cut out from the centre of a piece of wet cloth, which is placed on the surface of the selected part; a small roll of finely carded cotton, in a state of full combustion, is then held by a pair of dressing forceps immediately over the exposed spot of skin. The flame is directed upon the surface by gently blowing on it through a glass tube, or the barrel of a quill. It sometimes occurs that the cotton is with difficulty maintained in a state of combustion. By first reducing it partly to the state of tinder, this difficulty can be obviated. We have, also, mixed a small quantity of finely powdered nitre with the cotton, for the purpose of exciting the combustion. But this is attended with too great a flame, and, consequently, increases the pain of the operation. It is not absolutely necessary to envelope the cotton in linen cloth, as Larrey directs, although the heat will be rendered more intense by such a contrivance.

Larrey interdicts the use of the moxa on all that part of the cranium which is thinly covered by the integuments; also, on the eye-lids, nose, and ears; over the course of the larynx, trachea, sternum, mammæ, linea alba, organs of generation, superficial tendons, and capsular ligaments of the joints. But we cannot see any reason for absolutely condemning it in all these places. Provided it be only moderately applied, so as not to excite suppuration, there can be no objection to its use in almost every one of the localities here pointed out.

Some practitioners have been in the habit of using the actual, or metallic cautery. But its effects, according to the Baron, are vastly inferior to those of the moxa. They are more local, being almost limited to the point immediately touched by the instrument. The actual cautery also disorganizes the part to which it is applied; is accompanied by an intolerable pain, and is sometimes followed by a destruction

of the subcutaneous nerves, and a very copious suppuration. The moxa, which burns slowly, is less painful and alarming to the patient. Instead of exhausting the system by subsequent discharges, it has an invigorating effect by directly exciting the nervous powers.

But caloric is not the only agent which is supposed by our author to be derived from the moxa. To electricity is ascribed an important share of the influence which it exerts upon the body. "This remedy has also appeared to me, to communicate to the surrounding parts, together with a relative mass of caloric, *a very active and volatile principle*, furnished by the cotton-like substances during combustion. The excitation and irritation which result from the *two* products, (caloric and electricity) increased by blowing, propagate themselves by degrees to the deep seated parts, so as to re-establish the action of the nerves, which have become weakened or paralysed, and to arrest the progress of the morbid cause established in certain parts. When we wish to obtain superficial effects from the moxa, we have only to suffer it to burn, without using the blow-pipe." (p. 23.)

From these observations it appears evident that the Baron would explain the action of the remedy, on the common principle of counter-irritation. Indeed, he repeatedly calls the moxa an "*excitant and revulsive.*" When applied over the course of the nerves, however, it operates, differently from any irritant hitherto employed, by extending a peculiar excitement through all their ramifications, and imparting a new action to the solids to which they are distributed. These effects may be considered as somewhat analagous to those which are produced by passing the electric fluid through the nerves.

"To the exciting property of the moxa, which is most efficacious, may be added, if we wish, the revulsive and derivative property produced by the suppuration of the cauterized part, when we suffer this to take place. It is easy to distinguish the cases where it is necessary, from those in which it is useless, or even injurious." Suppuration will no doubt prove useful, in cases of an inflammatory tendency, on the

same principle that we derive advantage from setons and issues, but it will be apt to do harm when it is allowed to take place in exhausted constitutions.

The number of moxas to be applied for the relief of a chronic disease, is smaller than would, perhaps, have been anticipated. "We may apply one or two at a time; but it is necessary to leave an interval of several days between each application." A greater number at any one period, or a too frequent repetition of them, would, he thinks, be apt to produce traumatic fever and exhaustion.

"A humid state of the atmosphere is not so favourable to the success of the remedy, as clear and dry weather." This opinion, which we believe to be a correct one, must probably have been formed from a consideration of the electrical properties of the remedy. Damp weather is always unfavourable to the developement of electricity.

To promote the efficacious effects of this remedy, he recommends, in many cases, to precede its application either by dry or wet cupping, and to follow it by the internal exhibition of suitable remedies.

Cupping, he thinks, is always more effectual when performed by burning cotton, or some other inflammable substance, within the vessel. This is attended, in some respects, with the beneficial effects of the moxa, of which the exhaustion of the air by a syringe, is altogether destitute.

The baron has employed his favourite remedy in a large number of local diseases, several of which have been considered as incurable under the ordinary modes of treatment. The success which he derived from it is really surprising, and would hardly be credited on the authority of an inferior name. Our readers, however, must bear in mind that proper auxiliaries should always be resorted to in the administration of this, as well as of most other remedies. Vascular excitement should be previously reduced by means of general or local abstraction of blood. Occasionally a frequent repetition of blisters, and an issue, or seton, are necessary to relieve engorgement of the vessels in the affected part. Purgatives,

and, perhaps, emetics, will also be sometimes required to remove visceral derangements and nervous irritation. These circumstances having been premised, the application of moxas, according to our author, will rarely fail to relieve such local diseases as are not attended with a complete alteration of structure. Even in cases of actual disorganization it has afforded the greatest benefits, as will be seen when we come to detail the history of its success in diseases of the bones and joints, and in pulmonary consumption.

In various affections of *vision*, the practice of our author appears to have been successful. "The imperfect action of the membranes composing the globe of the eye, incipient cataract, and recent weakness, or paralysis of the optic nerve, truly indicate the application of moxa. It should be made in the course of the nerves most intimately connected with those of the eye, such as the trunk and principal branches of the facial, those of the superior maxillary and of the frontal. "By this remedy I have particularly stopped the progress of *amaurosis*, and have caused it to disappear, in some instances where the blindness was complete."

It does not appear probable, however, that this remedy will ever be of much service in any stage of real cataract; although such obfuscations of the transparent media, as depend upon a congestion in the deep seated veins, may be relieved by it. In the other affections which he has mentioned, a greater prospect of success may be anticipated.

We have now employed the moxa in three different cases of diseased eyes, with very evident advantage. The first case was that of a mulatto, in November last, who was afflicted with chronic ophthalmia, attended with thickening of the lids and pustules in the conjunctiva. A few laxatives, with a moxa four times repeated over the orbitar nerves of each eye, effected a speedy cure. The second case occurred in the person of a lady from Lancaster county, who had spent some months in town, under the care of several physicians, for the relief of a very afflicting morbid sensibility of both eyes. She had undergone ptyalism, setons, vesications,

the use of emetics, purgatives, &c., without the least perceptible advantage, and began to despair of relief. Applications of the moxa, however, over the trunks of the facial nerve behind the jaw, and the super-obitar on the forehead of both sides, repeated at three different periods, with intervals of four days each, gave her almost complete relief. So great was her confidence in the remedy, that she bore every repetition of it without a murmur, and regretted being obliged to leave the city without a longer trial of its virtues.

The third case is now under treatment. It is one of *complete amaurosis,* which supervened, about eighteen months ago, on an attack of bilious fever. The patient is a thick necked plethoric man, twenty-eight years of age, from Mifflin county, in this state. He came to the city twelve months ago, in a state of almost total blindness, and at first experienced considerable relief from the use of cuppings, issues, and emetics. Two paroxysms of epileptic convulsions, however, which occurred in June and August, from errors in diet, destroyed all the powers of vision that he then possessed. Subsequently, he was put upon the daily use of active cathartics, was frequently blistered, and had issues discharging from his lower extremities; but all to no purpose. The disease became more and more confirmed, and he finally went home in despair, some time in December last. But he was induced to return to the city about three weeks ago, in consequence of an idea, which his friends entertained, respecting a change in the nature of his disease. The pupils, which before were greatly dilated, had now become contracted to their natural size; and his general health was also amended. No absorption of the pigmentum nigrum, or discolouration of any part of the ball, had taken place. Still he remained perfectly blind; not being able to distinguish the least impression of light, except in the sunshine, when it appeared probable that caloric was most concerned in exciting the sensation which he experienced. Believing that the retinas were more or less paralysed from previous congestion in the choroid vessels, as well as from long continued disuse, we conceived

that he would present a favourable case for a trial of the moxa. Accordingly, on the third day after his arrival, moxas were applied over both facial and super-orbitar nerves. The result of these applications was that, in two days after, he could distinguish with his right eye the situation of a candle at night, and of a window in the day time. The right pupil also became moveable to the light. The moxas have been repeated three times since, with intervals of four or five days each, as the weather would permit; and his vision has been regularly increasing. After the second application, he could distinguish the direction of a hat carried between him and the light; after the third, his left pupil began to move, at the same time that the corresponding nerve became sensible; now he can discern the figure of a man standing before him with both eyes. We are encouraged, therefore, to hope for complete success in this case.

In affections of the sense of *smell* our author has obtained no success from the application of moxa. "It appears that the particular modifications that the olfactory nerves undergo in the pituitary membrane for receiving the impression of odours, renders the nervous tissue of this membrane inaccessible to the exciting and electric effects of moxa." He has also learnt from experience that moxa has no effect upon the sense of *taste.*

In *deafness,* however, he has been more successful. "When deafness is the result of the impression of a sedative, stupifying cause—as cold, applied suddenly to the ear, or the influence of a current of humid air directed upon this part, the moxa, if applied over the branches of the facial nerve, and about the auditory opening, restores the function of hearing. The calorific excitation of this cautery communicates the more readily with the auditory nerve, as it has intimate anastomoses with the small sympathetic (facial); this remedy cannot be supplied by a vesicatory. I might relate a great number of cures of deafness, from the employment of moxa, &c." He relates an interesting case of a young trumpeter, who, from bathing while in a full perspiration, was suddenly de-

prived of his *voice*, and the power of *hearing even the loudest sounds.* Thirteen moxas, preceded by cuppings, completely restored him to the use of his voice and hearing. We may add from our own experience, some testimony in favour of the remedy in this complaint. We have now employed the moxa in three cases of deafness, apparently unattended with any organic defect. In one of these a single trial of it has been attended with evident advantage. In the other two, repeated applications of the remedy have afforded considerable relief, and we are encouraged to continue the treatment.

In most cases of *spasmodic affections of the muscles*, the moxa is indicated, "but it should be applied as near as possible to the seat of the disease, and upon the course of the injured nerves." "It is not indicated in *acute neuralgia*, nor in *tetanic* affections, because it augments the irritation and tetanus."

In *chronic neuralgia*, (tic doloreux) a disease considered by almost all physicians as incurable, the moxa has proved eminently successful. He relates three cases in which complete relief was obtained by a few repetitions of the remedy. Its effects do not appear to be influenced by the cause of the disease, provided that proper auxiliaries be previously resorted to, for the purpose of removing arterial excitement. One of the cases, which he has detailed, originated from a blow on the malar bone; the other two could be traced to no external cause whatever.

The pathology which he advocates is very common among the French writers, although it can by no means be considered as unexceptionable. "The lesion consists in the chronic engorgement and inflammation of the membrane which invests the nerves of the part affected. This remedy, by producing an excitation upon these organs, causes a salutary derivation of the morbid principle, and re-establishes the course of the nervous fluid." In drawing up this hypothesis, which, we do not deny, is applicable to one variety of the disease, the baron must have overlooked the cases which depend on a primary disorder of the digestive apparatus; as well as those

which originate in some derangement of the cerebral structure. Whether or not this remedy will prove equally efficacious in the last mentioned varieties, we are not prepared to determine; but we are convinced that the preliminary treatment will be most essential to a cure. In those forms of tic doloreux, however, which are wholly confined to the painful part, there can be no doubt of the immediate powers of the moxa. We have lately employed it with remarkable success in the case of a young man, who had lost both his eyes by receiving a discharge of bird-shot in them, sometime in July last. But the loss of vision was not the most distressing circumstance in his case. Many small shot were lodged underneath the integuments of his forehead, which, by irritating the branches of the super-orbitar nerves, excited those convulsive and intolerable pains that characterize the *tic doloreux*. The pain came on in paroxysms with irregular intervals; and no mitigation of it was experienced from any mode of treatment until the month of February, when, by a few moxas applied on two different occasions, a complete cure was effected.

In the case of a little boy, however, who is still under treatment for severe neuralgic pains of the head and face, the moxa entirely failed, although it was fully applied and often repeated. But it should be observed, in explanation, that, the pains are probably excited by a large portion of the upper maxillary bone which is in a state of necrosis from scrofula.

The baron, also, speaks highly of the moxa in *paralysis*. He divides this disease into several varieties. The first is limited to an atony of the locomotive powers, without any loss of animal sensibility; in the second, which is very rare, the contraction of the muscles remains perfect, while the animal sensibility is entirely lost; in the third these two properties are affected at the same time, which constitutes complete paralysis. He has often found, also, that paralytic affections of the muscles are accompanied with an increase in the animal sensibility; and these are characterized by pain, with unnatural and involuntary motions in the affected member.

In the last affection, which has some affinity with *tic dolo-*

reux, the moxa should be allowed to suppurate, and it should always be preceded by cupping with scarifications. In the three first varieties, suppuration is not necessary; indeed, it would probably be injurious.

He does not approve of the use of the *nux vomica* in palsy; its effects are constantly pernicious, and he thinks it should be proscribed from practice. In all those cases which are attended with irritation and thickening of the nerves, there can be no doubt that this poison will tend to aggravate the neuralgia, without increasing at all the tonic power of the muscles.

He relates three remarkable cases, in which the moxa proved successful. 1*st*. Mr. P. an advocate of Paris, had been afflicted for three years by a gradual wasting of his strength, from a paraplegia, with neuralgia, marked by an inability of standing or walking, violent pains, nearly constant, trembling of the lower extremities, insomnia, and extreme irascibility. All the usual remedies in such cases had been tried in vain. After having applied several series of cuppings over the lumbar region, and in the course of the principal nerves of the lower extremities, he began the application of moxa, two at a time, commencing from that part of the vertebral column where the disease appeared to begin. This was about the tenth or eleventh dorsal vertebra, the spinous processes of which made an unnatural projection at that point, and the part was very painful to the touch. The first applications calmed the pains, and encouraged the patient. The two next were immediately followed by spontaneous motions in the diseased limbs, and a delightful calm, that, for the first time for a great while, permitted the patient to sleep sound. After the eighth moxa, he could stand upright and walk a few steps by means of crutches. The pains and tremors had entirely disappeared by the tenth application, and the contractibility of the muscles was sensibly increased. After this, every application evidently augmented the force and action of all the vital properties in the limbs, so that their nutrition was equally re-established. After the thirty-second application, the cure had become as perfect as possible. The patient could walk for a long time

by the assistance of a cane, without pain or inconvenience. The pains in the extremities were no longer felt, and the limbs recovered by degrees their primitive form and size.

This paraplegia presented a remarkable phenomenon, which he had never seen so strikingly displayed in any other case. "Every application of the moxa produced contractions as strong in the feet and legs as those which result from galvanism directed upon the denuded nerves of recently amputated limbs." A very plausible argument in favour of the electrical properties of the remedy might be derived from this fact.

The other two cases occurred in the persons of two soldiers of the imperial guard, affected by paralysis, with neuralgia of the fore arm and hand, in consequence of gun-shot wounds of the arm. Both of these were perfectly cured by the moxa, after all other remedies had failed.

Hemiplegia of the face has also been treated by the moxa with great success. Young soldiers were frequently attacked with this disease, in consequence of sleeping upon the wet ground in the open air. The eye of the affected side remained open during sleep, the angle of the mouth of the opposite side was retracted, in consequence of the action of the sound muscles. "The repeated application of small moxas over the course of the branches of the facial nerve, and some of the anterior branches of the cervical pairs, restored in these patients the paralysed muscles." In one case of much longer duration it also proved successful. A young lady, seventeen years of age, had been afflicted from her infancy with a hemiplegia of the left side of the face, supervening on a verminous fever. The deformity was extreme, especially upon the least smile. The moxa was applied in small cones along the course of the trunk and branches of the facial nerve, and followed by the use of ammonia, so as not to excite suppuration. At the fourth application, there was a sensible change in the disease; the improvement, however, was but slow, until the ninth application. After the seventeenth application, the cure became perfect.

We have employed the moxa in one case of the same dis-

ease. A Spanish Creole, from the island of Cuba, was afflicted with a partial hemiplegia of the right side of his face and head, and a chronic inflammation in his eyes, which resulted from rheumatism. He exhibited a proptosis of the right palpebra, with an evident paralysis of the zygomatici and levatores muscles of the same side. Three applications of the moxa, preceded by cuppings and a seton in the nape, completely removed the hemiplegia, at the same time that they, in a great measure, relieved the eyes.

It is more difficult, however, according to our author, to relieve *hemiplegia of the extremities.* He attributes this circumstance to the remoteness of the affected members from the brain and spinal marrow. On a similar principle, and with more plausibility, he asserts that fat people receive less benefit from the remedy in proportion to their bulk. When the paralysis is recent, and the subjects are thin, we may obtain a complete cure. He has treated a great number of soldiers affected with hemiplegia, from the excessive cold which they suffered in the Russian campaign. The moxa, applied on the sides of the vertebral column, and upon the course of the principal nerves of the limbs, produced astonishing effects. The cures, however, proceeded slowly.

Paralyses of the muscles of the superior extremities, which result from wounds, also yield to repeated applications of the moxa. It should be applied above the cicatrices, and over the course of the injured nerves. He relates an interesting case of a young soldier, in whom an entire loss of animal sensibility in the right superior extremity, resulted from the stab of a sabre, above the clavicle. Three moxas, preceded by cupping with scarification, were sufficient to restore the sensibility of the whole limb, and place it in the same situation as the rest of the body.

It was remarkable, that although the affected member exhibited no kind of sensibility under any stimulus, still its motions remained perfect, and were never suspended for a single moment. Larrey attempts to explain this fact, by supposing that the sabre only touched a few branches of the

cervicals, which are destined to form the cutaneous nerves. But a similar phenomenon is presented in cases of injury of the spinal cord. Sometimes the muscular powers are altogether paralyzed, while in other instances the animal sensibility will be exclusively affected. In such cases no explanation of the kind above advanced can be considered as admissible.

An instance of complete paralysis of one arm from injury of the nerves is now under treatment in the Philadelphia Alms House. It occurred several months ago from a dislocation of the humerus into the axilla, which probably contused, if it did not lacerate, the plexus of nerves in that region. All the modes of treatment usually adopted on such occasions had been tried in vain, before the use of moxa was commenced. Although that remedy has now been applied but a very few times, the condition of the limb is rapidly improving, both as it regards sensibility and motion; and a complete cure is anticipated by the attending physician.

According to our author, a simple muscular paralysis of the inferior extremities, resulting from an injury of the spinal marrow, may be relieved by the moxa. The viscount Gen. M——, was seized with a paralysis of the inferior extremities, with an unnatural projection of the spinous processes of the lower dorsal vertebræ, deep seated pains in this region, and retention of urine. All the organic and sensitive functions were impaired. Nine applications of the moxa, with purgatives, a catheter in his bladder, &c., effected a perfect cure.

In all *chronic diseases of the head*, he has employed this remedy with great success. In idiopathic epilepsy, hydrocephalus, chronic cephalalgia, &c., &c., the application should be made on the base of the cranium, and especially about the union of the squamous sutures, with the lambdoidal. He relates five remarkable cases of diseases in the head, which were treated by him.

First.—A young trumpeter, in consequence of a fall from his horse, suffered epileptic fits for two years, frequently twice in a day. His cranium was much disfigured, and had

acquired, in a short time, a considerable increase of size. The eyes were very prominent, and almost immovable, the pulse slow, the respiration laborious, and the extremities almost always cold; standing and walking were performed with difficulty, and all the sensitive functions and the mental faculties were very imperfect. After a free bleeding from the jugular, repeated cupping, ice upon the head, sinapisms to the legs, and the internal exhibition of calomel, fifteen moxas were applied about the head, till, by the end of the tenth month, the patient found himself perfectly cured.

Second.—A grenadier had all the symptoms of hydrocephalus internus, and was cured in four months by similar treatment.

Third.—He obtained the same success by the same means, in Mrs. J——, an English lady, in whom an acute dropsy of the right ventricle occurred suddenly, so as to produce apoplexy and hemiplegia of the left side. The late celebrated John Bell assisted him in the treatment of this case.

Fourth.—A child, eight years old, exhibited all the symptoms of a chronic dropsy of the ventricles, with enlargement of the cranium. After the usual treatment, he applied upon the nape and on the sides of the head several moxas, and afterwards the actual cautery twice over the posterior and lateral fontanelles. In nine months this little patient was restored to perfect health.

Fifth.—Another child, nine years of age, of a scrofulous habit, and affected by the same disease, characterised by the same symptoms, was cured by the same means.

He has also removed entirely by the moxa, applied on the sides of the head and occiput, chronic and rheumatic headaches, which had resisted a great number of remedies.

In mental diseases, attended with excitement, the moxa is *contra-indicated,* however highly it may be extolled by some authors.

In several diseases of the chest, our author reports favourably of the moxa. He has employed it with great success against *asthma*, when it was not hereditary, or produced by

a bad conformation of the thorax, and the subject not too far advanced in life. He placed cylinders of moxa in two parallel lines on the sides of the chest, towards the anterior attachments of the great pectoral and serrated muscles.

Intermittent, nervous palpitations of the heart, arising from weakness of this organ, and of the spinal marrow, are successfully combatted by moxa, if applied on the sides of the vertebral column, and about the region occupied by the heart.

The remedy is also efficacious in *old catarrhal affections, and chronic inflammations of the pleura.*

In *consumption*, however, the highest encomiums are lavished upon the moxa. It produces "a resolution of the lymphatic engorgements, or scrofulous turbercles, and of symptomatic abscesses, or abscesses by congestion, when they are not too far developed. It deterges internal ulcers, stops caries of the bones, produces adhesion and cicatrization of the walls of abscesses, and purulent cavities established in the substance of the lungs, or any other part become the seat of phthisis. In a word, the patient is conducted to a complete cure, &c."—"The internal remedies, more or less extolled by authors, as the acetate of lead, and particularly the prussic acid, are for the most part injurious, at least useless. If, however, there be any reason to suspect a particular virus, it will be first necessary to destroy this cause, and when the disease shall have become insulated, to attack it by the moxa." "We should select, in its application, those parts of the chest which are nearest to the diseased portion of the lungs. There can be no doubt that the hollow cylinder of wood used by Laennec, would be favourable to this research; but the experienced physician has no need of it. Percussion, pressure made with care and habit, and the impression exerted by the fingers between the ribs, will enable us to assign, with great certainty, the seat of the disease."

Seven cases, which presented all the symptoms of genuine phthisis, and which were either partially or fully cured by the use of moxas, aided by other appropriate treatment, are related by the Baron with great minuteness. The celebrated Laen-

nec attended with him on several of these cases, and ascertained, by the stethescope, not only the existence of ulcerated cavities in the chest, but their subsequent progress, also, towards a complete cure.

The moxa has also been known to produce a resolution of hydro-thorax and hydrops pericardii, while in an incipient state.

In several chronic and organic diseases of the *abdominal vicera*, the moxa is recommended by our author. 1*st*. Of the *stomach*. The engorgements of the coats of this viscus, and the schirrhus, which is ordinarily the result of them, even after the passage of the aliments has become obstructed, may be relieved by the frequent application of the remedy upon the epigastrium. 2*d*. Obstructions of the liver, spleen, or any other abdominal viscus, may be attacked with equal success by the moxa, especially when the disease has not arrived at its greatest degree of development. 3*d*. We may produce a salutary revulsion in chronic engorgements of the *uterus*, which are almost always followed by cancerous ulcerations, by the application of moxas over the lumbar regions, preceded by cupping and laxatives. He has removed this disease by these means in several women, who had strong symptoms of it.

But the moxa has been attended with the most signal advantages in the different forms of *osseous phthisis*, or "that asthenic, rheumatic, or scrofulous affection which generally attacks young persons in the fibrous cartilaginous and bony structures, such as the spine, the junctions of the bones of the pelvis, and the articulations of the extremities." He divides this disease into two kinds, *Rachitis* and *Rachialgia*. The great difference between these two consists in this, that the former is unattended with caries and ulceration, which are the usual consequences of the latter. The former originates from a defective assimilation of food in infancy and childhood; while the latter is frequently found to depend upon a rheumatic disposition, as well as upon a scrofulous habit, and does not usually occur so early in life.

"The effects of *rachitis* are softening of the bones, curvature of the vertebral column, and more or less gibbossity. The moxa is, without question, the best remedy against this disease." Pouteau recommended it highly; but Desault was the first who ascertained that the success of the remedy is most certain in this disease, when the wounds, or eschars made by the moxa, are not suffered to suppurate. The application should be made as nearly as possible over the course of the posterior branches of the vertebral nerves, between the transverse processes, so as to communicate at the same time with the spinal marrow. The Baron does not approve of corsets, or other mechanical means. Indeed he thinks them, in general, highly pernicious. "They will serve, to a certain extent, in pressing down the curvatures or projections of bone; but if the morbid process continue, the disease will develop itself towards the opposite points, so as to affect the integrity of the internal organs. It is necessary, therefore, to proscribe the use of these machines, and limit ourselves to the moxa, and internal remedies, which will have a tendency to second its effects. I could relate a great number of cases of the successful application of moxa in this disease."

Rachialgia is considered by our author as a much more formidable disease. He thinks it to be "in all cases, either a rheumatic or scrofulous affection established in one of the points of the vertebral column, the principal effect of which is a latent or chronic inflammation in the fibro-cartilaginous and bony tissues of the vertebræ; it is a true phthisis. This inflammation, so far from increasing the volume of the parts by engorgement, weakens their tissue, and appears to accelerate the process of absorption and decomposition, so that the bodies of the vertebræ, where the alteration first takes place, by degrees become softened. The intervertebral cartilages are first decomposed or dissolved; to this effect, absorption, erosion, or caries of the osseous substance, in corresponding points soon succeeds, and develops itself, more or less rapidly, according to the intensity of the causes, the age, and idiosyn-

crasy of the individual; the caries rarely attacks the spinous, or transverse processes. At the first moment of the erosion, there is emitted by all the diseased vessels a purulent, serous fluid, which accumulates at first under the membranes, or investing ligamentous texture. Afterwards it becomes extravasated through the cellular structure towards the most depending points, or towards those where it meets with least resistance; and accumulates at places more or less remote, where it produces a symptomatic abscess, or abscess by congestion."

The symptoms which first indicate the existence of rachialgia, are obscure, deep-seated, local pains. They at last become increased, and are propagated in the course of the spinal marrow, and nerves which emanate from it; especially those which go to the extremities nearest to the disease. The action of the muscles of these parts become impaired, without being paralysed; spasmodic pains, and a sort of tension, or accidental retraction, with a sensation of cold, independent of the air, are experienced in those limbs. To these symptoms are added dullness, oppression, loss of appetite, emaciation, slow fever, with irregular intermissions, followed by colliquative sweats, and marasmus. It has been designated by the names "vertebral disease," "curvature of the spine," or "*maladie du Pott.*"

The baron does not approve of the vegetable caustic recommended by Pott. The copious suppuration which it occasions weakens the patient very considerably, without producing the desired revulsion, especially if there be symptomatic abscesses. If these abscesses are opened early, before efficacious means have been employed against the caries, whatever may be the process, the patient dies very soon. Now, in the administration of these means, it is necessary to endeavour to stop the process of suppuration; it is sufficient to produce an excitement on the parts affected, to divert the morbific principle, and to change the vital properties of the inflamed parts. Moxa, preceded by cupping, with scarification, fulfils this double indication. A great number of patients, whose situa-

tions were considered desperate, have owed their safety to this heroic remedy.

Nine cases are related, in which complete cures were effected. One of these, "General L ——, exhausted by a variety of debilitating causes, was attacked by a dorsal consumption, slow fever. great loss of power in the genital organs, curvature of the spine, uneasiness and numbness in the lower extremities, and marasmus in the first degree. This affection had resisted a great number of remedies. It was decided in consultation, that a series of moxas should be applied upon the vertebral column and the region of the sacrum. without discontinuing the bark and ferruginous preparations at that time administered. With the three first applications a favourable change took place; the strength of the patient returned in proportion as the applications were repeated. At the seventh, he was in a state to walk alone; and by the thirteenth he went to the mineral waters to complete a cure already far advanced. He has made several campaigns since."

"Mademoiselle D., twenty-five years of age, was in the first stage of marasmus, with strong symptoms of pulmonary consumption. The dorsal vertebræ were curved backwards and towards the right side. The scapula of the same side was detached from the trunk nearly an inch by a soft tumour, or incipient abscess by congestion. These symptoms announced the first stage of a caries of the vertebræ. The debilitating regimen, to which she had been subjected for several months, was replaced by one that was tonic and nourishing; the bark, combined with opium, and balsamic substances were prescribed. Twenty moxas were applied successively, after intervals of three or four days, upon the sides of the spinous processes of the dorsal vertebræ. The first favourable change was the sudden and entire cessation of the symptoms of pulmonary consumption; and soon after a reduction of the projection of the dorsal vertebræ, the resolution of the subscapular tumour, and the return of the scapula to its natural position. By degrees the general powers of the system returned, and

the internal organs recovered their functions; in a word, this young lady now enjoys perfect health."

The other cases were of a still more alarming character; but it is unnecessary to detail them on the present occasion.

As we have already observed, our author altogether disapproves of the practice of opening the abscesses in the ordinary way. After having used the moxa, however, until the progress of the disease was arrested, he has opened the abscess, in some cases, obliquely by means of a narrow knife, heated to incandescence. All the purulent matter should be instantly evacuated by dry-cupping, and a slightly compressive bandage applied.

Another process is recommended by him as still more advantageous, when the fluid contained in the abscess has spread into a portion of the cellular tissue, which communicates with the purulent sack. This consists in *passing a seton through the cellular tissue*, exterior to the sack: the fluid will pass out at the same time by both the wounds, and will continue gradually to ooze out until it is entirely evacuated. Then, if the caries of the bone which had furnished this fluid be stopped, as we must suppose in this case, the complete cure of the patient will be the more certain, as the matter of the abscess will be evacuated gradually, and without allowing the external air to communicate with the purulent cavity. Two cases, which were treated advantageously by this method, are related.

We have now employed the moxa in three cases of rachialgia, with evident success. In the first of these, an interesting girl, sixteen years old, a curvature of the dorsal vertebræ had been progressing for three years towards the right side, until a great deformity of the chest and shoulders was produced. Steel had been administered for a long time; and the machine, first described by M. le Vacher, resorted to without affording the least advantage. She became extremely weak and emaciated, and, in the month of March last, was seized with severe pleuritic pains in the left side of the chest and region of the curvature. Her pulse was at the same time very much

excited; her skin was hot, and respiration laborious. By several venesections, and repeated cuppings with scarification, these symptoms were subdued. There still remained, however, for some time afterwards, a sensation of great weakness and oppression in the back part of the chest and spine; and genuine hectical exacerbations, followed by exhausting sweats, were repeated every afternoon. For these symptoms digitalis, alterative doses of blue-pill, antimonials and laxatives, were perseveringly employed, until the excitement was reduced. The moxa was then resorted to, and repeatedly applied, in the way already described, over the region of the curvature. The first applications were followed by very sensible relief; the second so far removed the weakness of the back and extremities, as to allow her to stand erect and walk across her chamber with considerable ease. After the fifth, she was altogether freed from every disagreeable sensation in the affected parts, and could remain out of the chamber to which she had been confined, during the whole of the day and evening. By strictly adhering to a diet of milk and farinaceous articles; and by using alteratives and laxatives, with moderate exercise, she has continued to improve in her general health. There is now every reason to hope for a perfect recovery in her case, with the exception of the deformity, which has become permanent.

The second case occurred in the person of a sister of the former, two years older, and of a more vigorous constitution. She had a double lateral curvature, and complained of tenderness on pressure over the spinous processes of the distorted points, with an almost constant sensation of pain and weariness on the convex side of the lowermost curvature. She was put on an alterative course of medicine, with purgatives; and she was restricted to the same diet as has just been detailed. After one full cupping over the region of the curvature, the moxas were four times applied with the effect of completely relieving all her uneasiness and debility.

The third case is that of a young child, five years old, with a posterior projection of the upper lumbar vertebræ, and a

partial paralysis of the inferior extremities. Purgatives had for a long time been employed, and issues, such as were recommended by Pott, had been kept discharging during several weeks. Although these remedies improved the constitution of the child very much, and relieved the weakness of her extremities to a considerable extent, still she remained in a disabled state, tottering, and staggering in her walk, and falling down over the slightest obstruction. Two applications of the moxa, on each side of the curvature, have already removed the paralytic symptoms, and a few repetitions of the remedy will probably conduct her to a complete cure.

Sacro-coxalgia. A separation of the sacro-iliac suture may result from external violence, and from the delivery of uncommonly large children in young women. Such cases, several of which have been treated by our author, are usually managed by retentive and compressive bandages. A separation of the same suture, however, sometimes occurs from rheumatic inflammation of the bones, and constitutes a disease precisely similar to rachialgia in the spine. A case of this kind was cured by M. le Heritier; who, after having used the actual cautery, ingeniously contrived the idea of fixing the two bones together, by means of an elastic bandage. The frequent application of the moxa offers a powerful auxiliary to this plan of treatment.

The same kind of affection sometimes attacks also the sterum, (sternalgia) the ribs, (costalgia) and the scapulas (scapulalgia); and the results of this disease, established in the substance one or more of these bones, is altogether the same as in the preceding cases. The abscesses, which take place, as in rachialgia, more or less remotely from the focus of the disease, are invariably produced by the caries of these bones. He has also remarked, that when the opening of the abscesses takes place spontaneously, before the caries in the bone producing them has been stopped by the means already pointed out, the disease is always fatal. On the contrary, when the moxa is applied early, so as to stop the progress of the caries, the operation of opening them is followed by hap-

py consequences, of which the Baron has seen numerous instances.

Femoro Coxalgia, or the hip-joint disease, is, also, of the same nature, resulting from a latent and chronic inflammation of the apparatus of the coxo-femoral articulation. It is ordinarily the effect of a rheumatic affection, or exhaustion of the prolific powers of the patient. It may be, moreover, the effect of an hereditary or acquired scrofula. When it arises from the former causes, it rarely attacks very young, or very old persons, manifesting itself generally from the first period of puberty to the age of manhood. When it depends on the latter cause, it may attack the youngest children as well as adults.

He divides this disease into three stages. *First*,—elongation of the diseased limb, from the state of relaxation and paralysis, into which the muscles surrounding the joint have fallen; and to the engorgement, and inflammation of the synovial membrane and inter-articular ligament. The *second* stage is marked by a dislocation of the joint, from some slight external cause, after the erosion of the round ligament. He thinks the dislocation never takes place spontaneously. The *third* stage is characterised by the progress of the caries, the developement of the abscesses externally, and a febrile and cachectical state of the patient.

When the disease has not passed the first or second stage, it is susceptible of cure, especially if the patient be removed from the action of the causes which have produced it. But if it has arrived at the third stage, it is much more difficult to stop its progress and obtain a cure, although some examples of recovery are mentioned as having occurred to our author.

In the first stage, the inflammation of the articulating parts should be relieved by cupping with scarifications applied repeatedly around the joint. Afterwards, if the inflammatory symptoms remain, or if they return in the course of the disease, he recommends to introduce a seton into the fold of the thigh, through the integuments and cellular texture. The moxa, afterwards, produces the happiest effects.

Professor Rust, of the university of Berlin, used with great advantage, and without any preparation, the actual cautery, which he applied about the articulation in three oblique lines, uniting at the trochanter. He observed, immediately after the cauterization, that the limb was suddenly restored to its natural length, and became level with the opposite.

But our author has observed that, when the practitioner confines himself to the employment of the metallic cautery, the elongation of the limb gradually returns, and that those symptoms of the disease, which had for a short time ceased, soon return. He declares, however, that we may prevent their return by the repeated application of moxa, and cure the disease by persevering in its use. He does not think the metallic cautery absolutely necessary, although it concurs powerfully in assisting the action of the moxa; which, from its not acting with the same energy, does not stop so promptly the progress of the disease.

If caries has commenced, and there is a purulent collection, the effects of the moxa are less prompt and efficacious. As they often succeed, however, practitioners should feel encouraged to persevere in the use of them. "The violent, but gradual excitement, which the moxas communicate to the diseased parts, stops the morbid process, and appears to augment the action of the absorbents; so that the fluids, accumulated in the abscesses about the joint, or distant from it, if they be not too much distended, are absorbed and thrown into the circulation. I am ignorant of the parts through which the absorption of this matter is effected; but I am inclined to think, that it is through the cellular tissue and venous system. In all these cases it is announced by the diminution of the tumour, and a pustular eruption, which takes place over the whole surface of the individual, as well as by the earthy and purulent sediment of the urine, which is constantly precipitated, during rest, to the bottom of the vessel."

The Baron strenuously opposes the common plan of opening the abscesses, until, as in rachialgia, the caries which gives origin to them be stopped by the use of moxas and other ap-

propriate remedies. When it becomes necessary to open them, he recommends to perform the operation with a red-hot lancet; and immediately afterwards to evacuate their contents completely, by means of dry cupping over the orifice. A thick compress, soaked in camphorated oil of chamomile, should then be applied upon the external wall of the abscess and kept in its place by a compressive bandage. By these means the opposite parietes become agglutinated together, and contract mutual adhesions to each other, so as entirely to obliterate its cavity.

The most absolute rest should be enjoined upon our patients, for a long period after the use of these remedies. The Baron extends this term to the length of five or six months. At the same time, we should feel inclined to pursue the alterative treatment recommended under the head of rachialgia.

Our author relates seven very interesting cures of the hip disease, which we have not room to detail. We have not had any experience in this disease since the publication of the work under review; but we are strongly persuaded of the efficacy of the treatment which we have described.

He has, also, employed the moxa "with great success in lymphatic diseases of the other articulations of the limbs;" especially in that called white swelling of the knee, respecting which he intends shortly to publish another essay. Our own recent experience, in two cases of white swelling of the elbow joint, induces us to think very highly of the use of moxa in such cases; and we are disposed to allude to them as conclusive examples of the influence of our remedy in organic derangements. One of these occurred in the left arm of a negro child, from scrophula; the other took place in the right elbow of a coach trimmer, fifty years of age, from rheumatism in an intemperate constitution. The tumefaction in both these cases was enormous; the pains very severe; and fistulous ulcers, which existed, allowed a probe to pass into the very substance of carious bones, both above and below the joints. A cupping having been previously resorted to by the coach-trimmer, a number of moxas were applied on opposite points,

around the diseased part, in both cases. The applications have now been repeated four times in each case, with intervals of four or five days; and already the swellings have nearly subsided, the pains have been removed, and the fistulas have closed. The moxa is entirely depended on, and will, in all probability, effect complete cures.

We have extended our observations upon the first essay of the work before us to this length, because we conceive that the moxa is the most important, as well as novel subject, which can be introduced to the notice of our readers. We shall, on some future occasion, examine the interesting points of a pathological character, which have been presented to us by the remaining essays. Every thing which the Baron has discussed in the present work, is full of practical observation and interesting inquiry. If we have only succeeded in exhibiting one of his favourite topics in a distinct light, our readers will not remain satisfied without procuring the volume with which his translator has favoured them. M.

ART. II. *Recherches et observations sur les effets des preparations d'or, du Docteur Chrestien dans les traitements de plusieurs maladies et notament dans celui des maladies syphilitiques;* par J. G. NEIL, M. D. Paris, 1823. Octavo, pp. 391.

Researches concerning the medicinal effects of Gold, &c. &c.

During the superstitious ages of alchemy, gold was highly esteemed as a medicine. The *aurum vitæ*, as well as the *aurum potabile*, is spoken of by Salmon, an English writer of the 17th century, as a remedy of extraordinary powers.

"The former of these preparations," he says, "prevails wonderfully against dropsy, jaundice, plague, pleurisy, rheumatism, scurvy, leprosy, elephantiasis and *French pox;* for it purifies the blood, and strengthens the marrow in the bones, and radically drives forth all noxious matters or humours, out of the human body. It is a famous medicine, and deserves, by the greatest right, to be called a *panacæa:* it kills worms and heals all venereal ulcers;

purges both by vomit and stool, and taken in somewhat too large a dose, causes salivation, if often repeated."*

Extravagant as these praises are, gold did not long sustain its reputation as a medicinal agent; and, by the middle of the last century, it was scarcely known in the materia medica. Within the last twelve years, however, its powers have again been introduced to the notice of the profession, by M. Chrestien, in a work published in 1811, entitled, *Méthode Iatraleptique.* In 1814, a second edition of this work appeared, embracing much additional testimony in favour of the good effects of this remedy. Upon the authority of this writer, it was soon afterwards prescribed in various countries by men† of respectable standing in the profession; and their reports of its effects were, for the most part, quite favourable. In 1818, M. Chrestien drew up a full account, chiefly from his own experience, but partly, also, from the experience of others,—of its effects in various diseases, and laid it before the French Academy of Sciences. The committee appointed by the society to examine and report on this communication, of which the celebrated Percy was a member, reported unfavourably, stating that the accounts which had been published of its remediate powers were exaggerated and equivocal.‡ The hope, therefore, which M. Chrestien entertained of having his favourite remedy formally, and, as he imagined, honourably introduced into the materia medica, was frustrated in this quarter. To do away the discredit which the report of the committee tended to throw upon the article, was Mr. Neils' principal motive for publishing the present work. His experience with the medicine was extensive and successful; and he felt himself called on to offer his testimony in its favour, in opposition to the judgment of *Percy.*

In the introduction to this work, the author gives a cir-

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* Ars Chirurgica, p. 276. By W. Salmon, London, 1699.

† Fodere, Detouches, Odelius, Béche, Mitchell, Duportal, Plenciz.

‡ Journal Complémentaire du Dict. des Sciences Médicales—October, 1818.

cumstantial account of Mr. Chrestien's mode of preparing the *triple muriate* of gold, and of his manner of prescribing it.* He administered this salt, by frictions on the gums and tongue, in doses of one-sixteenth to one-eighth of a grain daily. The oxide of this metal he employed internally, in doses of from half a grain to two grains; and the metallic gold, in the form of very fine filings, to the extent of three grains daily. It does not appear that any peculiar advantage is obtained by using the triple muriate, in the form of frictions. It is much more conveniently, and, according to our own observation, as safely and efficaciously administered internally, either in the form of pills, or enveloped in some mucilaginous fluid. In this way we have frequently given it in doses of from one-fourth to one-tenth of a grain, without having, in a single instance, observed any unpleasant consequences to follow. In prescribing it in the form of a pill, we prefer uniting it with the extract of conium maculatum. By its narcotic powers, the conium allays the irritation which the action of the gold is occasionally found to excite in the stomach and bowels, and it, moreover, possesses no inconsiderable powers in itself, against those diseases for which gold is usually prescribed. This salt may also be very conveniently and properly administered in solution in the *compound decoction of sarsaparilla*, with the addition of simple syrup. Two or three grains of the muriate, are to be dissolved in eight ounces of the decoction, to which four ounces of honey must be added. Of this a table-spoonful is to be taken three times daily. The preparations of gold, like all the other heroic remedies, operate quicker, or slower, more violently, or more feebly, according to the age, condition, and the irritability of the individual; and, above all, according to the mode in which it is employed. According to Dr. Neil's experience, the powder of gold prepared with mercury, operates more slowly and in a less irritating way than the oxyd or the muriate; and the

* This preparation may be had in a very pure state at Mr. Stitts' apothecary store, at the North East Corner of Sixth and Race streets, of this city.

effects of the muriate are more permanent and certain than those of the oxyd. Gold, in its metallic form, although less efficacious than the muriate as a remediate agent, operates with great violence, and should be used with particular caution, especially when given to irritable subjects. Dr. Neil observes, that the auriferous preparations not unfrequently produce salivation. In the above extract from Salmon, the same effe t is noticed. The salivation produced by gold, is, however, of a different character from that which is excited by mercury. It is always mild, not copious, and unattended by that peculiar fetor which distinguishes mercurial ptyalism; nor is the taste materially altered, or the powers of the digestive organs much diminished thereby. During a salivation from gold, the patient need not be confined to his room, but may be permitted to follow his ordinary occupations. Salivation from gold is not liable, like mercury, to produce painful and extensive ulcerations of the gums and the tongue. It is attended, simply, by a slight inflammation of the inner surface of the mouth, and does not weaken, but, on the contrary, it invigorates the general powers of the system. Dr. N. observes, that a cold and damp atmosphere retards the operation of gold.

Having given an account of the general effects of gold on the animal economy, our author proceeds to detail the history of a very considerable number of cases of various diseases, in which he prescribed the preparations of this metal with signal success. Among the examples which he relates, as having yielded to the powers of this remedy, we find cases of *rhagades, condylomatus excrescences, inveterate leucorrhœa, bubo, gonorrhœa virulenta, venereal ulcerations and excrescences, general syphilitic affections, rheumatism, nodes, swelled and indurated glands, venereal eruptions, cutaneous ulcerations, general scrofulous habit of body, tinea, struma and scrofulous eruptions, scirrhous tumours, with and without ulceration, scrofulous disease of the joints, irregular menstruation, chlorosis from a scrofulous habit, lymphatic swellings and abscesses in*

children, ulcers of all kinds, caries, scrofulous opthalmia, goitre and scirrhous testicle. The complaints, however, in which this remedy is found most decidedly beneficial, are those of a venereal origin. In primary venereal affections, it is proper to postpone the employment of the gold until the first and more acute stage of the disease has passed by. The author observes, also, that in old and obstinate syphilitic disorders, considerable advantage will be gained by occasionally changing the form of the medicine. Sometimes he rose rapidly with the dose, and then diminished it again to its minimum. With regard to the powers of gold in scrofulous affections, he observes, that where the disease had not been of very long standing—where it was, as yet, confined to the less essential organs of the system,—where the whole glandular system was not yet too deeply involved in disease, and the general habit not too much depraved, he found this article of great use. In affections of this kind, he sometimes employed the oxyd, and at others, the *triple muriate.* He speaks in very high terms of the utility of an ointment, made by incorporating twelve grains of the powdered gold with an ounce of lard, as an application to scrofulous ulcers. Frictions with this ointment were also occasionally made, with benefit, on obstinate glandular indurations.

Out of the great number of cases related by the author, we subjoin an account of a few of the most interesting, as examples, at once of the powers of the remedy, and the mode of managing its employment.

A man aged forty-seven, applied to Mr. Neil for relief from a distressing venereal affection. He complained of great pain in his bones, attended with so much torpor and stiffness of the lower extremities, that he could not walk. There was an exostosis on the left clavicle, and a hard indolent tumour of the size of an egg, on the forehead. The patient had had frequent venereal infections, which were never regularly treated. Mr. N. prescribed the use of the muriate of gold. The first three grains were divided into fourteen, twelve, and ten parts; one of which was rubbed into the tongue during the day. With the exception of a

slight increase of appetite, no sensible effect was produced by these doses. During the employment of the fourth grain, however, the swelling on the forehead inflamed and suppurated; the sixth grain excited a mild fever, which lasted three days, and was attended with swelling of the tonsils; to this fever a mild salivation succeeded, and continued a month. The medicine was omitted after the sixth grain. During the progress of the salivation, the pains abated rapidly; the lower extremities recovered their pliability and strength; the abscess on the forehead healed, and the exostosis, also, gradually disappeared; the patient, in short, recovered his health perfectly. The author gives another case, similar to this one, from the work of Gozzi, an Italian phycian which was successfully treated with gold.

In 1817, a gentleman consulted Dr. N., with gonorrhœa and chancre on the body of the penis. He had been treated in London with mercurial remedies, and was considered entirely well. About six months afterwards, two bubos appeared in his groins. These suppurated, under the use of mercurial frictions, by which a slight salivation was excited. Seven or eight months after this second cure, the patient began to experience pains in his bones, which, by degrees, increased to great violence. Having suffered a whole year in this way, he resolved to go to Paris for aid, and was there again treated with mecurial frictions. He derived great relief from this treatment, but the complaint did not entirely yield. Seven months after this period, the pains again returned with great violence, becoming at last excessively tormenting, especially in the back of the head. An eminent Parisian physician now recommended the employment of the *Rob de Lafecteur.** After using nine bottles of this medicine, the patient

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* The following is said to be the correct formula for making this *Rob.*

Rad. Sarsaparillæ. Lig. Guaiaci āā ℔i. Folior. Sennæ. mimosæ nilot āā ℥i. Rad. amom. Zingib. ℥ss. aq. fontanæ O. x. Boil the two first articles in water for an hour, strain, and add to the residuum the same quantity of water as before; boil it for two hours, and towards the end of the boiling add the other ingredients, strain, and to both decoctions add common sugar and honey, of each three pounds, and boil the whole to the consistence of a syrup. Dose, ℥ii twice a-day. The patient is directed to take the first dose early in the morning, and the second four hours after dinner. He is also to take, during the day, twelve small tumblers full of sarsaparilla

was so far relieved, as to remain perfectly comfortable for twelve months. At the end of this time, however, a new chancre appeared on the glands, although the patient declared that he had not been exposed to the chance of a new infection. The bulb of the urethra, also, became considerably enlarged; he had pain in the hypochondria, and acquired a sallow complexion. The *Rob* was again resorted to, but to no advantage. The patient now applied to Dr. N. who put him upon the use of the muriate of gold. The dose of the medicine was gradually increased from one-tenth to one-fourth of a grain per day. On the third day after he had risen to one-fourth of a grain, a gentle fever came on. The dose was, therefore, again reduced to one-eighth of a grain per day; after the use of eleven doses of which the febrile symptoms reappeared. The gold was now discontinued; a profuse perspiration broke out, which lasted five days, and was attended with a peculiar milliary eruption. The chancre gradually healed; the swelling of the bulb of the urethra disappeared, as well as the pain in the hypochondria, and the patient recovered his original vigour and vivacity. The author here remarks, that the preparations of gold sometimes do not evince their effects until their use has been continued for a very considerable time. Cases, in fact, occur, in which even very large and long continued doses do not produce the least reaction in the system. Dr. N. found that in many individuals the preparations of gold excited a hilarity of disposition, especially in those who were much debilitated.

A woman aged thirty, had chancre with bubo, and *fluor albus*, in her eighteenth year. About ten years afterwards she became affected with pains in the bones of her left leg, which soon acquired an excessive degree of violence, being more particularly intense during the night. A node appeared on the left tibia, and almost the whole surface of her body became covered with warty excrescences, some of which were of the size of a mulberry. The pains spread to the superior extremities, and rendered her incapable of moving her body. A slow fever supervened—attended with watchfulness, inappetency, and great despondency. In this situation, she was put upon the use of the muriate of gold. She be-

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decoction, seven before dinner, beginning two hours after having taken the first dose of *Rob*, and five after dinner, beginning also two hours after the second dose.

gan with one-sixteenth of a grain a-day, and gradually increased it to one-fourth. After the sixth day, the appetite was improved; after the twentieth, the pains were much less severe, and after the thirtieth day, they were greatly diminished;—perspiration profuse and general came on, which brought great relief. The patient became more and more cheerful; she could now rest and sleep at night. By the ninetieth day, her strength was fully restored—the catamenia, which had been surpressed for five months, reappeared—and she soon recovered a complete state of health.

The author states, that, in one instance only, did this remedy produce colic pains. In this instance, the irritation of the bowels was followed by pretty smart purging, of four days continuance. In general, the auriferous preparations have a tendency to produce a slight degree of constipation; Gozzi, however, observes, that when the doses employed in the frictions are very large, they are apt to excite pain in the stomach and bowels, and diarrhœa. We have given the gold in much larger doses than those which are mentioned by our author, and have never known any disagreeable effects to arise from it. This, perhaps, arose from our mode of employing it, which was generally in combination, either with opium or cicutæ.

In 1816, Dr. N. was consulted by a young man who had gone through a course of mercurial treatment at Paris, without obtaining any relief from it. He had an enormous phagedenic ulcer in the left groin—the consequence of a venereal bubo—which extended down close to the anus, and about four inches above the symphisis pubis. The inguinal glands were almost entirely destroyed; the edges of the ulcer were uneven, elevated, recurved, bloody, and exceedingly painful; the surface was covered with pale-bluish granulations, discharging a thin, yellowish, and very fetid and coroding pus. He had a slow wasting fever. Every local application which he had tried, only aggravated his sufferings. Dr. N. prescribed the muriate of gold internally, and the gold ointment (made by mixing one drachm of powdered gold with an ounce of lard) was directed to be applied as a dressing to the ulcer. Much relief was obtained from the first dressing;—the

discharge was lessened, and the spongy granulations subsided. On the twentieth day from the first employment of the gold, the edges of the ulcer were more regular, and cicatrization had commenced in the centre. By the forty-seventh day, the ulcer was completely cicatrized, the fever subdued, and perfect health soon re-established. Dr. N. found the gold powder (*or devisé*) an excellent remedy for venereal warts. He applied it in the form of an ointment, or mixed with spittle, once or twice a-day.

A lad, aged about eleven, affected with lymphatic swelling of one of his knees, applied to Dr. N. for advice. The disease was of two years standing; the condyles of the femor were considerably enlarged; the joint was stiff, and the leg retracted. Various remedies had been fruitlessly employed; and the patient had just returned from Paris, where he had been under the treatment of several eminent practitioners, without obtaining any relief. Dr. N. put him on the use of the muriate of gold. The first grain was divided into fifteen, and the second into fourteen doses. These produced no sensible effect. The third grain was divided into ten doses, and, by the time that these were used, the lymphatic swelling was diminishing rapidly, and the boy could extend his leg considerably. Three grains more, divided each into eight doses, were afterwards used, but the enlargement of the condyles remained undiminished. The muriate was then employed in doses of one-seventh of a grain daily; and after having taken two grains, in these doses, he felt a considerable itching in the tumor, and the swelling became smaller, and less firm. The remedy was continued one month longer, and the dose increased to one-fifth of a grain daily. This produced profuse sweating, and the patient improved rapidly. The knee, to all appearance, became perfectly sound; a slight lameness only remained, from the shortening of the leg by the disease.

A child had an eruption on the head, which was cured by pulling out the hair. Some time after the disappearance of the eruption, the glands about the neck and lower jaw began to enlarge on both sides. Suppuration took place just under the angle of the left jaw, seven months after the first appearance of the swellings. The left knee, also, now inflamed and suppurated. The abscess was opened by a surgeon. A year after the ulceration under the angle of the jaw, the ulcer was about an inch in diame-

ter, with hard irregular edges, and a very unfavourable aspect. The whole surface of the knee, also, was ulcerated; the edges of this ulcer were irregular and painful, the granulations unhealthy, and the discharge of an ichorous character. The glands of the neck still remained swollen and hard, but not painful; the abdomen was tumid; the left leg somewhat atrophic, and the patient was much exhausted and emaciated. He had a constant slow fever, attended with nightly exacerbations. The muriate of gold was prescribed, and the patient's condition soon became more favourable under its use. On the twenty-third day, his appetite was much improved, the febrile exacerbations had ceased, his strength was increased, and the ulcer on the knee looked much better, the edges being already considerably contracted After the fifty-seventh day, he took the filings instead of the muriate. One grain, and afterwards one and a half and two grains, were daily rubbed on his tongue. After having used the medicine in this form for forty-two days, the patient's health was much improved; his strength was almost entirely restored; the ulcer on the knee was diminished to half its original size, and the disease about the neck was in a corresponding state of improvement. By continuing the use of the medicine for some time longer, the patient's health was completely restored.

These are a few of the great number of cases given by our author, in illustration of the medicinal powers of gold. From our own experience, we are induced to estimate its virtues very highly. In old syphilitic complaints, and in such as proceed from the use of mercury, gold is undoubtedly a remedy of great efficacy. We will conclude this article, with an account of some cases from our own practice, illustrative of the efficacy of this remedy.

Case 1.—A young man, about seventeen years old, had been afflicted with chancre for several weeks, which had created a large induration around its basis, and was attended with a bubo of considerable size in his left groin. He first took the blue pill three times daily, which salivated him severely, without producing any advantage. The bubo was retarded by purges, low diet and rest: but it did not afterwards subside under the use of a large vesicatory. He was then put under

the influence of the pills of muriate of gold and extract of cicuta. In eight days afterwards a manifest improvement had taken place, and in about a fortnight, both the indurated chancre and the tumour in the groin had entirely disappeared. It is now nine months since he was under treatment, and no constitutional affection has as yet manifested itself.

In the secondary forms of venereal affections, of both the first and second order of parts, gold is a still more valuable remedy. It produces a speedy filling up of the ulcers in the fauces, removes the discolourations of skin, and disperses the tumours of the bones and periosteum more rapidly, according to the observations we have made, than even mercury itself.

Case 2.—A woman, aged twenty five, had large and white excavations in her tonsils: several discoloured spots upon the skin of her neck and arms, and a prominent firm tumour on each patella, of about the size of a pullet's egg. She first took the muriate of gold with cicuta, with evident good effects; but on changing the formula to a solution of muriate in the compound decoction of sarsaparilla the symptoms remained stationary. She was therefore ordered to resume the pills of the muriate and cicuta, in which the dose of the former was increased to one-fourth of a grain, three times daily. In about fifteen days every symptom of her complaint was removed, and she has not applied for advice since. She was dismissed from treatment in September last.

Case 3.—The husband of the above woman had large ulcers on both legs of an irritable character, with deeply copper coloured skin around, and two large nodes, one on the middle of the right tibia, and the other on the opposite ulna. This patient was completely relieved in less than a month by the use of this remedy.

Case 4.—Bruce, a coloured man, had large excavated ulcers in his tonsils, which had came on about three years after the use of mercury unsuccessfully administered for the original venereal disease. He was put on the use of the muriate of gold, and in a short time the cavities were filled up, and cica-

trization took place in less than three weeks from the time he first took the medicine.

Case 5.—A gentleman, thirty-two years of age, was affected with exceedingly painful ulcers in the tonsils, uvula and gums, and on both sides of the tongue. He could only swallow the blandest fluids, and he articulated with great difficulty and indistinctness. The ulcers appeared to be of a phagedenic character, although they were generally covered with a white incrustation. They were accompanied with a highly inflamed state of the surrounding mucous membrane. The lower incisors were very loose and black, and their alveolar processes were deeply exposed, and finally extracted in a necrosed state by a pair of forceps. High febrile irritation, of a well marked hectic character attended, as well as great emaciation and prostration of strength. He had been infected with the primary symptoms of the venereal disease at three several times previously; all of which attacks had been subdued by mercurial remedies. Eighteen months had elapsed after his last infection, before the symptoms which we have described made their appearance. He had taken the blue pill, corrosive sublimate &c., without any advantage. Under these circumstances he was put upon the use of the muriate of gold, dissolved in sarsaparilla decoction, in the proportion of one-eighth of a grain to every half ounce of the latter. Considerable amendment was soon manifested, which progressed regularly for about two weeks. The symptoms then remained stationary for several days, when the bowels became costive and the stomach disordered. An emetic of ipecacuanha, followed by a dose of rheubarb and magnesia, corrected these symptoms; and the gold again was resorted to in larger doses. The ulcers again improved, and finally, under the use of the same remedy, combined with cicuta, they were completely healed in less than five weeks from the commencement of the treatment. The general health and appetite of the patient, at the same time, improved, so that he was enabled to return to his occupations sometime before his cure was effected. He

discontinued the use of all medicine in November last, since which time he has remained perfectly well.

Case. 6.—A young man, aged nineteen, applied to us with an enormous enlargement of the lymphatic glands of the throat. They formed an exceedingly large tumour, which extended underneath the jaw from one mastoid process to the other. Two abscesses had previously ruptured and discharged a scrofulous matter. His general health appeared to be good, and his appetite was unimpaired. He was put on the use of the gold and cicuta pills. After having taken them for about a week, the tumour rapidly diminished, and in about twenty days the several enlarged glands which were matted together into the common mass, became insulated from each other. They afterwards decreased very slowly, and although greatly diminished, they have not yet entirely disappeared.

Case 7.—A young lady, aged twenty years, had enlarged scrofulous glands on both sides of her neck, in the left axilla, and under the clavicle of the same side. She exhibited all the appearances of a scrofulous habit of body. But the symptom which alarmed her family, and induced her to apply for medical aid, was the appearance of an induration of considerable size in her left mamma. As this tumor was slow in its progress, and gave little or no pain, we supposed it to be of the same character with the scrofulous glands in her neck. She was put upon a farinaceous and milk diet, and the gold and cicuta pills were prescribed for her, in October last. In four weeks the glands in her throat and axilla had almost entirely disappeared, and the tumour in her mamma had greatly subsided. The remedy was then discontinued, under the idea that it had made a sufficient impression upon the constitution. We saw her a few days ago, and there was hardly a vestige of the tumour remaining.

Case 8.—Miss B. was covered, in January last, with large herpetic blotches, of a blood red colour, which occasionally desquamated, disappeared, and again returned. Her case was pronounced, by a respectable practitioner of New York, to be a genuine leprosy. She took the gold and sarsaparilla about

four weeks, and was completely cured. It should be stated, however, that the use of gold in this case was followed by the arsenical solution, which assisted, in no small degree, to confirm the cure.

Case 9.—We were consulted by Mr. Wood, in Race, above Tenth-street, for advice in three cases of *porrigo circinata*, in his family. The youngest of the patients was about two years old, the second five, and the third about seven. We at first employed various local applications, recommended in such cases, but without any permanent advantage. The gold was finally prescribed. One grain of the muriate was dissolved in an ounce of water, to which an ounce of simple syrup was added. Of this the youngest took twenty drops, and the others, a small teaspoonful, three times daily. The white precipitate ointment was applied to the diseased spots once or twice a-day. In the course of about four weeks from the time they first took the gold, the disease in the three little patients was entirely removed.

Case 10.—Mr. Mulloch's child, in Lawrence-street, was affected with an eruptive disease of the scalp, which we considered as belonging to the variety of *porrigo favosa.* A bound girl in the same family was affected with the same disease. The gold was given in these two cases, in solution, as in the above instances. In Mr. M.'s child, the disease disappeared in about three weeks, but in the case of the bound girl, no impression whatever was made on the disease, although the medicine was continued a very considerable time. No local applications were made in these instances.

Case 11.—We were called, last fall, to a daughter of Mr. Middleton, back of No. 300 Race-street, aged about three years. Her gums were in a state of extensive ulceration, of a gangrenous character, which had come on without any assignable cause. The incisors of the lower jaw had come away, and the upper part of the alveolar processes were exposed and black. There was considerable irritation of the general system; but the child did not appear to suffer much pain from the ulceration. The ulceration in the soft parts was progress-

ing rapidly, and there was every appearance of a speedy fatal termination. The gold was prescribed in solution, as in the last two cases, and the affected parts were moistened with a weak solution of nitrate of silver in water. The disease of the soft parts was somewhat checked in about four days; but the necrosis of the lower jaw was evidently extending. In about eight days from the commencement of the treatment, the ulceration of the gums was obviously arrested, and in three weeks the soft parts appeared to be almost entirely healed. The gold was, however, still continued; and it was soon found that the whole lower maxillary bone had lost its vitality, and was about to be separated and cast off. It was gradually pushed upwards, and separated from the adjoining soft parts, so as to stand exposed above the inferior lip in the front part of the mouth. By degrees, it became entirely loosened from all its attachments, and might have been readily taken out whole with the slightest force, if the opening of the mouth had been sufficiently large to admit of its extraction. As the front of the bone rested on the inferior lip, and projected a few lines beyond the surface of the mouth, it was readily divided with a small saw at the symphasis; after which the two branches of the bone were taken away with the fingers without the slightest hæmorrhage or pain. With the exception of the right condyle alone, the whole of the bone came away. The child soon recovered its health perfectly; the chin is considerably retracted, but the deformity is much less than might have been expected. E.

ART. III.—*Eilfter Jahrsbericht des Kœniglichen Poliklinschen Institutes der Universitaet zu Berlin; umfassend die Jahre.* 1820—21—22. Von DR. C. W. HUFELAND, and DR. E. OSANN. Berlin, 1823. Octavo, pp. 101.

Eleventh Annual Report of the Royal Polyclinic Institute of the University of Berlin, including the years 1820—21—22, *&c. &c.*

Attached to the University of Berlin, is a charitable clinical institution, to which the poor of that city have free access for

medical aid, either as out-door or in-door patients. During the years 1820—21—22, there were 2447 patients treated in this institution, of which number 1754 were cured, 168 removed to other institutions, 68 died, and 118 remained under treatment.

There is much interesting matter in the present Report, and what adds to its value, it is drawn up with great neatness and method. We proceed to give our readers a condensed account of its contents.

Fever.—The prevalent character of the febrile diseases treated in the Polyclinic Institute, during the three years included in the Report, was of the inflammatory. Gastric and rheumatic fevers were of the most frequent occurrence. In these forms of fever, the muriate of ammonia, so much recommended by Dr. Hoffman, was found a very useful remedy. It was given, either dissolved in Vin. Antimonii, or in some mucilaginous liquids, and, occasionally, also in combination with laxatives. The German physicians, in general, prefer the muriate of ammonia to nitre, as an antiphlogistic, in febrile affections. Its disagreeable taste is almost entirely covered by being dissolved with the extract of liquorice in water. The sulphate of quinine was given in some cases of intermittents, with very prompt relief. In a few cases of typhus fever, complicated with local inflammations, much advantage was obtained from topical bleeding, by means of leeches, and from ice-cold applications over the affected parts. In these cases, also, the *chlorine* was found particularly efficacious. Diluted in water, and mixed with some mucilaginous substance, it was readily taken, and used for a long time, without disordering the stomach, or producing any irritation in the glottis. It sometimes increased the alvine evacuations. Where there was a disposition to diarrhœa, the acid was given in combination with infusion of *Colomba.*

Exanthemata.—Scarlet fever did not occur often, and was in general mild. Under a moderately exciting *regimen*, the disease went regularly and favourably through its course; but under a very heating one, it was apt to assume a malignant

character. In some cases, attended with unusually severe anginose affections before the appearance of the eruption, much benefit was derived from the application of leeches to the neck. Several cases occurred where the eruption receded soon after its appearance, and was followed by alarming symptoms of inflammation of the brain. Local bleeding, together with the internal use of musk, calomel, and the precipitated sulphuret of antimony, appeared to do much good in such cases. *Measles* prevailed epidemically at Berlin during the last year included in this report. The epidemic was of a mild character, and did not offer any thing unusual either in its symptoms or complications. In a few cases of metastasis to the lungs, relief was obtained from the application of blisters and leeches to the thorax, and the use of calomel, digitalis and musk.

Chronic cutaneous diseases.—These affections, it is observed, are to be viewed, in the majority of cases, as symptomatic of a general and more intimate affection of the animal economy. Prescribing with this view, the remedies were chiefly directed against the radical affection, and the result was in general very favourable. A child, affected with *petechiæ sine febre*, depending on a scrofulous habit and intestinal worms, was speedily cured of its cutaneous disease, by remedies directed against these causes. In herpetic eruptions dependant on a scrofulous dyscrasy, great advantage was derived from the use of *Plummer's powder*,* *g. guaiac* and the external employment of the *white precipitate ointment.* Among the external means of relief in obstinate herpetic affections, scarifications deserve to be particularly mentioned. In eruptions depending on a syphilitic taint, perfect relief was always obtained from the internal use of *muriate of mercury, g. guaiac.* and *dulcamara.* The *calx antimonii*

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* ℞. Sub-muriat. Hydrarg.
Sulph. Aur. Antimonii āā ℈i.
Sacch. Alb.———— ʒii. M. dose from eight to ten grains for an adult.

sulphurata, and *antimonium crudum*, were employed with much success against scabies, and anomalous eruptions depending on a rheumatic cause.

Phlegmasiæ.—Urgent, as was, in general, the necessity of a strictly antiphlogistic treatment in the phlegmasial diseases, instances of these affections occurred, which, by a rapid and unexpected transition from the inflammatory to the typhoid state, rendered the employment of the most potent stimulants necessary. Cases of this kind commonly terminated in death. The old practice, lately brought forward again, by Peschier,* of employing large doses of *tartar emetic* in inflammatory affections of the breast, with a view to its antiphlogistic or sedative effects, was frequently resorted to, with the happiest results. In fifteen cases of this kind, treated in the Polyclinic Institute, from half a grain to a grain of this article was exhibited every two or three hours, with unequivocal advantage. In a few cases, only, was it necessary to discontinue the *tartar emetic*, in consequence of its too violent action on the stomach and bowels. This method of treatment was especially efficacious in the primary stages of rheumatic, rheumato-gastric pneumonic inflammations. In a number of cases, the *tartar emetic* rendered the use of bleeding unnecessary, and speedily effected a favourable change in the disease. Not less useful was this remedy, in the second stage of pure sthenic inflammations of the breast, after one or two bleedings. It had the effect of subduing the remaining inflammatory diathesis, and of promoting the expectoration, as well as the cutaneous and venal secretions.

Pulmonary Consumption.—The number of patients suffering with this disease, who resorted for advice to this institution, was very great. With regard to the relative frequency of the disease in persons of different occupations, it was found, that weavers, (seidenwirker) stonecutters, masons, carpenters, and persons accustomed to play on wind instruments, were most subject to it during the three years included

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* Bibliotheque Universalle. Genevé, Juin, 1822.—See our Analecta.

in the report. During this period there was not a single case of the disease observed in a butcher. This corresponds with the observation of *Withering*, that butchers are least subject to phthisis. *Pearson* has noticed the same fact. Besides the pernicious influence of particular occupations, rheumatism, and anomalous hæmorrhoidal affections in men, irregularities of the catamenia in women, imperfectly cured pulmonic inflammations and neglected catarrhs, were the most usual occasional causes of this disease. *Prussic acid*, though certainly too much extolled by some, was much used in the form of *aqua lauro-cerasi* in combination with *digitalis* in *phthisis florida*, and generally with considerable advantage, though in no instance with complete success. Besides these remedies, issues, repeated small bleedings, marubrium, millefolium, &c. &c. were occasionally employed, with benefit.

Diseases of the Heart.—Various cases of dynamic affections of the heart, depending, sympathetically, on irritations seated in other organs, were treated at this institution.

A lad, about sixteen years old, of a full habit of body, suffered much from a pressing pain in the left side, attended with violent palpitations of the heart, and was much subject to walking in his sleep. Repeated bleedings, digitalis, aqua lauro-cerasi, and purging with sulphate of soda, cured him of his disease.

A girl, aged sixteen, who had not yet menstruated, suffered from her fifth year, (at which time she had a severe attack of pleurisy) with constant palpitation of the heart, attended with headache, and occasional spells of fainting. The distress in the breast always increased towards evening. The pulse of the left arm was fuller and stronger than that of the right; and she frequently experienced a numbness and tingling sensation in the extremities of the fingers. As all the other symptoms indicated a general plethora, depending, probably, in a considerable degree, on the retention of the catamenia, she was put upon an antiphlogistic course of treatment, which had the effect, at once, of establishing the regular flow of the menses, and of freeing her of her disease.

Tussis Convulsiva.—Of all the means resorted to in the treatment of this disease, *Belladonna* proved the most decidedly advantageous. In one instance, only, did this article produce *narcotic* effects; and these were not violent, and soon disappeared on discontinuing its use. To a child about twelve weeks old, affected with hooping-cough, an eighth of a grain of the powdered root of belladonna was given twice a day, with prompt and decided benefit. In the atonic stage of this affection, very great advantage was derived from the use of the *lichen islandicus* in decoction. In some instances, where the belladonna had greatly mitigated the spasmodic character of the disease, but where the cough and blennorrhœa still continued, notwithstanding its further use, the cure was speedily completed by the employment of the *lichen.* In one instance, a rapid cure was effected by the tartar-emetic ointment rubbed on the breast, so as to produce a copious pustular eruption. The *aqua lauro-cerasi*, proved very effectual in a case of this disease in an adult. Besides these remedies, the *extract. lactucæ*, as well as the *lactucarium* of Drs. Coxe and Duncan, was given in this affection, with various degrees of advantage. The *lactucarium*, obtained from *lactuca scariola*, was given to two children, severely affected with this disease, with remarkably prompt and permanent relief. One of these children was four, the other six years of age. Two grains, rubbed up with sugar, was given to each, in divided doses, daily. In six other cases, however, which were afterwards treated with the lactucarium, obtained from the *lactuca scariola*, as well as with that extracted from the *lactuca sativa* and *l. virosa*, no improvement was effected in the disease. The *extractum cannabis* was given in one case, with speedy and complete relief. The patient was twenty-one months old. Four grains of this extract were at first given during the day, which was afterwards gradually increased to twelve grains. No unpleasant effects arose from its use.

Arthritis.—In acute arthritis, besides antimony and nitre, emetics were frequently given with very good effect. Con-

siderable advantage was also derived from the use of *aqua lauro-cerasi*, combined with *extractum aconiti*, or spir. mindereri. In chronic cases, on the contrary, *g. guaiac. ext. aconiti* dissolved in antimonial wine, *corrosive sublimate* with opium, liquor ammonii hydro sulphurati, and similar remedies, were employed with considerable advantage. In several obstinate cases of atonic arthritis, the internal use of *petroleum* was of unequivocal service. In some incipient paralitic affections, depending on an arthritic habit, great benefit resulted from the internal use of the following mixture. ℞. Tinct. rhois toxicodendri ʒiv T. guaiaci ammonat. Tinct. aconit. æther. āā ʒiv. M. Of this twenty-five drops were given every three hours. In some cases, the dose was gradually increased to forty and fifty drops. Together with the use of this prescription, frictions with Tinct. Cantharid. were made on the affected part.

Scrofula and Worms.—In the scrofulous affections of children, most benefit was derived from the milder preparations of antimony and mercury. Goitre is not a disease of frequent occurrence in Berlin and the surrounding country. *Iodine* was used in two cases of this affection only. In one of these, the *kali hydrothiodinicum*, (hydriodate of potash) was employed in the form of an ointment, made by mixing half a drachm of this substance, with an ounce of lard, of which the size of a hazlenut was rubbed into the tumor twice a-day; in the other, the iodine dissolved in alcohol, was exhibited internally. In both instances, considerable relief was obtained. In the latter case, it became necessary to omit the medicine, several times, in consequence of the violent excitement it produced, even in moderate doses, in the nervous system; the strong congestions in the head, and the distressing constrictions it caused in the throat. In the verminous affections of children, which are exceedingly common in Berlin, the *seminæ santonicæ* in combination with *rad. filic. maris* and *limatura stanni*, were generally found most efficacious. Several cases of tape-worm were cured by the male fern.

Cephalalgia and Vertigo.—Maria H——, aged about forty, had suffered for several years with excessively violent periodical pains in the head. The paroxysms of pain were so severe that they often caused syncope and spasmodic affections resembling epilepsy. The catamenia were regular. Evident symptoms of general plethora having been present, she was put under a strictly antiphogistic treatment, and by repeated general and local abstractions of blood, together with the continued use of refrigerents, a perfect cure was effeted.

Louisa K——, aged twenty-five, of a delicate and nervous constitution, having unexpectedly received word of her father's death, became immediately affected with vertigo, followed by violent spasmodic affections of the respiratory apparatus, constrictions of the throat, and insensibility. From that time, she was subject to similar attacks, coming on, occasionally, several times in a day. All the other functions appeared to go on regularly. She was treated by gentle laxatives, stimulating pediluvia, and cold applications to the head, together with the internal use of *Valerian*, Fol. aurant. and *æther*. Under the employment of these remedies, she recovered her health.

Various cases of vertigo, without headache, but frequently attended with a tremor of the extremities, and some degree of hallucination, occurred in the practice of the Polyclinic Institute. Excessive stimulation by ardent spirits, visceral obstructions, and anomalous hœmorrhoidal affections, appeared as the principal causes of this disease.

Frederic B——, a shoemaker, aged fifty-six, was brought to the Institute, December 4, 1822. He was affected with a constant strong trembling of his limbs, great restlessness, visual illusions, especially by night, and the most distressing anxiety of feeling, amounting sometimes to the deepest despondency. His conversation indicated, by times, an approach to insanity. The patient had already suffered a long time with these symptoms, though in a less violent degree, and was subject to slight hœmorrhoidal affections. The functions of the digestive organs were considerably affected. There was a total absence of appetite, and the tongue was thickly covered with fur; nausea and occasional vomiting was experienced in the morning. Infusion of *valerian*, in com-

bination with *extract taraxaci*, extr. hyoscyami, and Aq. menthæ; together with *crem tartari* and *lac. sulphuris* as a laxative, were at first prescribed. Afterwards, the valerian alone was given, with the daily use of the following pills: ℞. ***Extr. aloes, gr. xv. Extr. gratiolæ*** ʒss. ***Extr. taraxac. Lac. sulph. Sapon. venet.*** āā ʒi. ***M. f. pill pond. gr. ii. from three to six of which were taken daily.*** By the continued use of this prescription, several copious and bad-looking stools were procured daily; the appetite and digestion became gradually better; he acquired strength, and by the thirteenth of January he was discharged, with his health restored.

In a case of *vertigo caduca* of a woman, aged forty-one, which appeared to depend on menstrual congestions, and on anomalous arthritic affections, very great benefit was derived from a powder composed of *g. guaiac, lac. sulphuris* and *crem. tartar.* The same remedy was also used successfully in a man aged fifty-two years, affected with this disease, depending on hœmorrhoidal congestions and an arthritic disposition of the system.

Dropsy.—In the treatment of this disease, *rad. levistici, fol. digitales* and *calomel,* appeared to do most good.—Several cases are mentioned in which a decoction of the rad. levist. with small doses of the powder of digitalis and calomel in combination, proved speedily effectual.

Diseases of the Uterus.—Several cases of Scirrhus and Carcinoma Uteri were treated at the Polyclinic Institute. *Iodine* was used in three cases of this frightful disease. In two of these the iodine was given internally, in the form of a tincture, made according to Coindet's prescription.* In the other, it was employed in the form of an ointment,† by external frictions. In every instance, the specific and powerful effects of this medicine were observed. When given inter-

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* Hydriodat. potassæ, gr. 36. Iodine, gr. 10. Aquæ distillat, ʒi. m. dose from six to ten drops.

† Hydriodat. potassæ ʒss. Axungiæ ʒiss. m. ft. Ungt. The size of a nutmeg is to be rubbed in at each twice a-day.

nally, although in moderate doses, it produced, besides other feelings, a sensation of painful pressing down and straining in the uterine system. When rubbed upon the lower part of the abdomen, it manifestly increased the disposition to hæmorrhage. Two of the patients were evidently much relieved by this medicine; but remained under treatment, when this report was drawn up. In the third case, in which the iodine was used both internally and externally, together with Herb. *cicuta* and *folia lauro-cerasi*, the disease appeared to be entirely removed.

The following case of *scirrhus uteri*, in which the *iodine* was successfully employed, is related in the appendix, by Dr. Klaproth.

Wilhelmina F., aged twenty-five, had, during her childhood, laboured under scrofulous affections, which, however, disappeared at the period of puberty. The catamenia came on in her thirteenth year, and continued to recur regularly, and without any particular disturbances in the system. She became pregnant in her seventeenth year;—Parturition was very severe, requiring the aid of the forceps. In the twenty-second year she suffered a miscarriage, which was followed by a considerable hæmorragia uteri, of four days uninterrupted continuance. Four months after this, a second hæmorrage came on, and continued eight days, by which the patient was exceedingly exhausted. From this time on, the menses ceased to return, and a continued mild leucorrheal discharge took place. In her twenty-fourth year this discharge acquired an acrid and offensive character, and was attended with a continued violent burning pain in the lower part of the abdomen. On a more careful examination, it was found that the os tincæ and neck of the uterus were enlarged and scirrhus, and very sensible to the touch. The *tinct. iodin.* was now prescribed, of which she took eight drops three times daily. In addition to this, an ointment composed of ungt. digitalis, ungt. cinereum, extr belladon. and ol. hyoscyam. coct. spread on a piece of spunge, was applied to the os tincæ per vaginam. After the patient had gradually increased the dose of *iodine* to twenty-eight drops, syncope, violent arterial action, watchfulness, and an uncommonly excited state of the nervous system took place.

The dose was therefore diminished. By this time the discharge from the uterus had become much less corroding, and diminished in quantity. Menstruation also occurred, though weak and irregular. The dose of the *tinctura iodinæ* was again increased, until she took twenty-three drops three times a day, and it was again found necessary to lessen it. By continuing the employment of the medicine, the disease, at the time the case was drawn up for publication, had almost entirely disappeared—only a slight enlargement and hardness could be felt per vaginam.

Chorea St. Viti.—This disease was of very frequent occurrence at the Institute. It was generally found connected with the process of evolution immediately preceding the period of puberty, and also with worms. *Zinc*, particularly the *cyanite of zinc*, was used with the greatest success.

Augusta D., a girl aged sixteen, who had not yet menstruated, was admitted into the Polyclinic Institute. She had been treated for chorea, at the institution, eight years before. When admitted this last time, she laboured under a violent attack of the disease. Pills, composed of *g. ammon. ol. valerian, extr. taraxac. and flor. zinci* were prescribed; the use of these was alternated with that of the *pulvis ærophor.* The continued use of these remedies brought on the menses, and gradually removed all the spasmodic symptoms under which she laboured.

Two cases of this disease, apparently depending on irritation from intestinal worms, were cured by anthelmintic remedies, and small doses of flor. zinci, combined with absorbends. A number of worms were discharged in both instances.

In the appendix to this volume, Drs. Rosenstiel and Herkenroth report two cases of *chorea* which were successfully treated by the cyanite of zinc.

1. Emelia M., a very delicate child, aged seven, had suffered slight spasmodic affections from the first period of dentition. In the fourth year, according to the information received from her mother, she became affected, in consequence of a fright, with spasmodic twitches of the upper extremities, and the muscles of

the face, which, however, did not continue long. In the sixth year, she suffered an attack of *nervous fever*, from which she recovered slowly. In the month of February of the present year (1822) the spasmodic movements of the arms and muscles of the face returned, without any evident exciting cause, and gradually increased both in violence and extent, until the affection assumed the character of a perfect case of *chorea*. Debility, and a morbid sensibility of the nervous system, appeared to be the principal circumstance upon which the disease depended. There were also some reasons for suspecting the existence of intestinal worms. The indications of cure were, therefore, to remove the irritation in the alimentary canal, and to give strength to the nervous system. To fulfil the first indication, two or three teaspoonfulls of the *electuar anthelmintic.* Ph. P. were given daily. To answer the second indication, one grain of *flor. zinci* was ordered to be taken three times a day. The diet enjoined was simple, but nourishing. No worms, however, were discharged by the use of the electuary, and, as the indications of their existence were of a doubtful character, the vermifuge was omitted. The treatment was continued with the *flor. zinci;* the doses of which were gradually increased, until as much as grs. x. were taken during the day. Not the least relief was obtained from this treatment. This remedy was therefore also discontinued, and instead of it, the *cyanite of zinc* was given, in doses, at first, of one-third of a grain twice a-day. This, also, did not produce any favourable effect. The spasms increased,—the motions became more violent, and *aphonia* and *dysphagia* now increased the distress of the patient. The doses of the *cyanite of zinci* were then gradually increased; and the child was bathed in an infusion of *rad. calami aromat.* By continuing these remedies until fourteen grains of the cyanite were taken daily, an almost total abatement of the symptoms had taken place. The little patient could now speak again, swallow without difficulty, and exercise a full command over the motions of her extremities. To confirm the cure, she continued the use of the medicines for some time longer; it was, however, found necessary finally to omit the zinc, in consequence of the total loss of appetite, and the excessive nausea it occasioned.

Ludwig S., a boy aged twelve, had been healthy up to the time

of his attack with this disease. The complaint came on at once with great violence. Impelled by a continual internal feeling of restlessness, and a ceaseless convulsive mobility of his whole body, he ran and sprung about the room, over tables and chairs, and endeavoured every where to climb up, like a wild animal. This state of activity continued unabated during the night. His intellectual powers appeared to be nearly destroyed.—He seldom understood what was said to him. In this state he was admitted into the Polyclinic Institution. He was treated with *anthelmintics* and *flor. zinci;* and by their employment alone, was relieved of his disease in the course of about three months. About a year after this attack he was again taken with the disease, and again cured by these remedies. In about four months after this second attack, he experienced a third one, in all respects similar to the first. Anthelmintics, and the *flor. zinci* were resorted to, as in the previous attacks, but although the latter was given in as large doses as could be ventured, not the least amendment was effected. The following pills were now employed, and the result was exceedingly favourable. ℞. *zinci hydrocyanic. gr. xv. rad. valerian.* ℥ss *extr. valerian. q. s. ut fiant pilul.* №. 60. Dose, two every morning and evening, to be increased gradually. By the time that the dose was increased to five pills every morning and evening, evident amendment in the disease had taken place. The medicine was continued, increasing it gradually until he finally took eight pills twice a-day, and all the symptoms of the disease had disappeared. The pills were given about four months. E.

ART. IV.—*A Practical Essay on Typhous Fever.* By NATHAN SMITH, M. D. Professor of the theory and practice of Physic and Surgery in Yale College. New York. BLISS & WHITE, 1824. Octavo, pp. 88.

THIS small work proceeds from one of our most enlightened and experienced physicians. It is a plain, sensible, and instructive exposition of the author's views and experience concerning the nature and treatment of typhous fever—a disease, respecting which, medical opinion is as yet exceedingly unsettled, and, in many respects, unsatisfactory.

Dr. Smith observes, that the typhous fever of Europe, and particularly of England, is doubtless similar to the disease known in this country by the same name. We do not question the general correctness of this observation; but we are, nevertheless, persuaded that the term *typhus*, has, of late years especially, been very often greatly misapplied, both by the physicians of this country and of Europe. It is no uncommon thing for an ordinary continued fever, arising from atmospheric vicissitudes, to be dubbed with the name of *typhus;* more especially if, after a stout struggle on the part of the physician to subdue the disease, by what is called a *bold* practice, the patient sink into a state of irrecoverable prostration. We have known physicians to go to work upon such cases, and to purge and bleed—and bleed and purge, with the utmost industry, until subdued nature sunk, and then, forsooth, the disease was called typhus.

Typhous fever is very generally thought to be peculiar to the cold seasons of temperate climates. There is, however, much respectable testimony directly opposed to this opinion. Dr. Smith informs us that he has seen it "attended with all its characteristic marks, in every month,—nay, he might say, in every day of the year." Ferriar* and Wedekind,† whose opportunities of observation appear to have been very extensive, testify to the same fact. Certainly, this disease is, comparatively speaking, of but rare occurrence during the warm season of summer. Its infrequency, however, during this season, does not, we apprehend, depend on any power which a high degree of atmospheric temperature may possess, to destroy the contagion of typhus, but on the absence of those circumstances which favour the evolution of the contagion, in consequence of the freer ventilation of the habitations of people during this season than in winter. The warm and dry air of summer is also much less favourable to

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* Med. Hist. Vol. I. p. 78.

† Einige Blicke in die lehre von dem Ansteckenden faulen nervenfieber. Darmstadt. 1814.

the action of this morbific cause, than the cold and damp atmosphere of winter.

The contagious nature of typhous fever is scarcely questionable. Dr. Smith relates some cases in reference to this point, which place the affirmative of this question in a very strong light.

"A young man, says the Doctor, a pupil of mine, was attacked with typhous fever, from which he recovered with difficulty. Some of his family, who lived about forty miles distant, came and took care of him during his illness. Upon his recovery, they returned home in good health, but soon after sickened with the same disease, and communicated it to others who had not been exposed in the first instance. From this it spread to numerous other families in the vicinity, who had been exposed to the contagion. In the whole town where this occurred, there had been no case of typhous fever for many years, till brought there by the circumstances just related."

"During the prevalence of the typhous fever in Hertford, (Vt.) a woman went there from Chelsea, about ten miles distant, to visit and administer to a sister, sick of this disease. Others of her family contracted it from her, and in about four weeks there were thirty persons taken down with typhus, all of whom had been exposed to the contagion."

"A young man belonging to Plainfield, (N. H.) who had left his friends and resided for some time in the western part of the state of New-York, returned to his father, who had a numerous family. He found himself unwell before he reached home—was immediately confined with typhus, and soon sunk under the disease. In about four weeks after, I was called into the family and found nine members of it sick of the same disease."

The German writer already quoted, states, that during the late campaigns of the French against Russia, the typhous contagion generated in the hospitals and houses crowded with prisoners and the sick, was communicated to the inhabitants along the road by which the soldiers returned,—and that it afterwards spread gradually from the road-side to the adjacent districts, until the disease became widely epidemic. The

route of the returning army from Poland to Germany, and thence to the centre of France, could be distinctly traced by the desolating train of disease it left behind.

Evident, as it must appear, that typhous fever, under favourable circumstances, is propagated by contagion, it is nevertheless probable that it may also originate from causes of a different character. Errors in diet, the influence of atmospheric vicissitudes, marsh miasmata, and confinement in close and crowded apartments, are enumerated as the principal causes of this kind. Believing that typhus is a disease *sui generis*, as distinct and specific in its cause and character as small-pox, measles, &c., Dr. Smith, of course, rejects the doctrine which ascribes to these accidental causes, the power of producing typhus. The fact, however, which he adduces against this opinion, is by no means sufficient to justify any considerable doubts on this head. "The absence," he says, "of typhus in a large section of country, for an interval of more than twenty years, would lead us to doubt the possibility of its being produced by any of the accidental causes above enumerated; for in such an extent, and among so many people, it is impossible but that some of these circumstances should have occurred—and the disease of course be produced." The insufficiency of this argument is rendered manifest by an observation which the Doctor himself makes, in another place, in relation to *intermitting* fever. "On the Connecticut river, he says, from Northampton in Massachusetts, to its source, a distance of more than two hundred miles from north to south, and on all its tributary streams on both sides, for a hundred miles in width, there has been no instance of any person's having contracted the intermitting fever from the first settlement of the country to the present time." By a parity of reasoning, therefore, we might be led to doubt the possibility of marsh miasmata to produce intermitting fever; for as it would seem impossible that, during so long a time, and throughout so extensive a tract of country, marsh miasmata should not be generated, and consequently intermitting fever be produced, miasmata,

it might be inferred, cannot be a cause of this fever. There is, in truth, a great deal of mystery connected with this subject. We are utterly unable to give any satisfactory explanation of these phenomena, and for the present, we can only view them as inexplicable exceptions to what observation and experience has led us to consider the general course of nature.

That typhous fever, however, is not exclusively the production of a *specific contagion*, appears quite probable. We are not, however, disposed to believe with Dr. Good, that "any of the *ordinary causes* of fever may be a cause of typhus;" nor do there appear to be sufficient grounds for the opinion advanced by Armstrong, that marsh miasmata are a cause of this fever. Typhoid is evidently confounded with typhous fever by those who ascribe the latter disease to such an unlimited diversity of causes. The causes which, besides contagion, seem to be capable of producing typhus, are those which give rise to catarrhal fever, and particularly, that species of effluvium which has been aptly called ideo-miasma, and which contaminates the air of confined and crowded apartments. That a number of healthy people crowded into narrow and close apartments, may generate typhus,—especially if aided by a deficiency of wholesome and nourishing diet, the depressing passions, and a cold and moisture air, does not admit of a doubt.

It is in this way that it originates in our prisons, and on board of crowded ships. To give strength to the opinion he entertains of the strictly specific nature of typhous fever, Dr. Smith endeavours to show that it presents nearly the same uniformity of character as the small-pox, measles, and other confessedly contagious diseases. "Typhus," he says, "like other contagious diseases, has a natural termination, and if it does not end fatally when uninterfered with, it gradually exhausts itself and disappears; at the same time, unlike those diseases, it is not restricted in its duration to so narrow limits." With regard to this fever having a natural termination, exhausting itself, *if it do not end fatally*, the same might be said of many other diseases, which are manifestly

not contagious. That there is no particular resemblance, in this respect, between typhous fever and those diseases which are known to be produced by a specific contagion, is evident from the fact that typhus may vary in the duration of its course from about fourteen to sixty days, according to the experience of our author; whilst the specific diseases vary but little in this respect. Dr. Smith refers to another analogy between typhus and the common contagious diseases. This disease, he thinks, rarely affects the same individual twice. "During the twenty-five years," he says, since I first attended patients in this disease, and in that time I have visited many hundreds, and have witnessed its prevalence several times in the same village, I have never known or heard of its recurrence in the same person." In this opinion, however, he is not borne out by the testimony of other writers. Wedekind, who like Dr. S. considers contagion the sole cause of this disease, speaks of its recurrence in the same individual as by no means uncommon. "The majority of contagious fevers," he says, "with but few exceptions, attack the same individual but once. The contagious typhous fever, however, belongs to those maladies which may recur frequently in the same person. I have seen instances, where the same individual in an hospital, has had three and four distinct attacks of the disease. It was by no means uncommon, when the typhous fever prevailed in the hospitals, to see those, who had already convalesced, and were about leaving the house, sicken again with a fresh attack of the disease."*

It is clear, however, from the testimony of all those who have attended to this point, that the susceptibility of the system to the action of the typhous contagion, is, in general, much diminished by an attack of this disease.

Typhous fever is not unfrequently attended with symptoms indicating internal local inflammations. Such local affections do most assuredly occur in this disease; but their oc-

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* Op. Citat. p. 158.

currence is by no means so common as some late writers would have us believe; nor can we regard that pathology as correct, which considers these inflammations primary, and essential to the production of this variety of fever. Those who maintain that typhus is essentially connected with inflammation of some internal organ, as, for instance, the brain, according to Clutterbuck, rest their doctrine upon the appearances which are discovered on dissection. This would at first sight appear to be the most unobjectionable evidence on such a point. For it cannot, indeed, be denied that appearances resembling those which exist in inflammation, are very generally found in some of the internal organs of such as have died of typhus. It is far from being probable, however, that these appearances are really the consequence of previous inflammation in the part in which they are noticed. "*Neque quicquam esse stultius,*" says Celsus, "*quam quale quid vivo homine est tale existimare esse moriente imo jam mortuo.*"* We are not to suppose that the appearances which are discovered in the dead body, must necessarily have existed whilst yet living. Not only may a part which was free from inflammation during life, acquire, either in articulo mortis, or immediately after the extinction of vitality, a red and injected appearance, resembling that of an inflamed surface, but a part actually inflamed during life, will frequently exhibit no traces of inflammation after life is gone. The interesting experiments of Dr. Seeds,† show, in the clearest manner, what little dependance is to be placed on the injected appearance of the capillaries of internal organs, as an evidence of previous inflammation. This physician bled animals to death, by opening the internal jugulars; and on dissection, he uniformly found the contents of the cranium and spinal canal so gorged with blood, that it might at first sight have been imagined that blood-letting would have saved the animal.

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* De Re Medicina. Præfat. p. 11.

† Med. Chirurg. Journ. Vol. VI. p. 107.

The following observations of Dr. Smith, in relation to the primary seat and character of febrile action, appear to us so rational and interesting, that we are induced to transcribe the whole passage:

"According to our late nosological arrangements, the Pyrexia or febrile diseases, affect principally the circulatory system; if so, the affections of the other functions, are the consequence of the change first induced in this system. But as all the different parts of this system are destined to perform different functions, it may happen that a disease may primarily affect one part only, and the change produced in the rest of that system, may be the consequence of a change produced primarily in another part.

"In the sanguiferous system, the proper function of the heart seems to be nothing more than to receive the blood from the veins, and throw it into the arteries, which may be considered as living canals intended to convey the blood from the heart to the system of capillaries. Here all the functions belonging to this system are performed, such as nutrition, reparation of the body, absorption, secretion, and the production of animal heat. Of course, the functions of the heart and great arteries must be considered wholly subservient to those capillaries, which, in reality, perform all the great and essential offices of the circulating system.

"As this fever is supposed to make considerable change in the action of the circulating system, the question presents itself, what part is first affected? does the increased action of the heart and great arteries cause the increased action in the capillaries, or *vice versa?*

"In cases of local inflammation, which produce symptomatic fever, it appears very evident that the capillaries are first affected; the action of the heart and great arteries is not changed till symptomatic fever is produced; and that this symptomatic fever seems to commence in the capillaries, is evinced by the paleness of the skin, and the chills with which its first appearance is accompanied.

"The analogy between the inflammatory and febrile action is so great, that we may with confidence rely on the similarity of cause.

"The paleness of the skin, and the sense of cold spoken of above, which attend inflammation, and precede the attack of fever, or the developement of those phenomena to which we usually apply the name, and which is followed by an increase of the action of the heart and arteries, I explain in the following manner: before the diseased action can take possession of the capillary vessels, the natural and healthy one must cease, unless disease is a mere increase of the healthy action, which we have abundant reason to believe is not the case. It is during this interim, that is, between the interruption of the natural action, and the complete establishment of the diseased one, that the patient feels the chill.

"Something of this kind is observed in cases of local inflammation, which still continues to extend itself. A few lines beyond the discoloured part of the skin, between that and the portion which still retains its natural tint, there is a pale circle, evidently showing that the action of the capillaries in that part is suspended.

"Upon the whole, whether we consider typhous fever as dependant on local inflammation or not, it is probable, nay, it is very certain, that like all other febrile diseases, the morbid action commences and continues principally in the capillary system, and *that the change which we perceive in the action of the heart and great arteries, is symptomatic of the disease existing in that system.*

"The most violent affections of the heart and large arteries, as in palpitation, do not produce the slightest symptoms of fever, which serves to show that these two parts of the circulating system have diseases as distinct and different from each other as their functions."

That the functions of the capillaries are primarily deranged in febrile diseases; and that it is on the peculiar action of these vessels that the peculiar character of such diseases depend, appears to us extremely probable. Mere increased action of the heart and larger arteries, does not constitute fever. Such an increased action may be produced by any sudden and active exertions of the body; but unless the capillary functions are disturbed thereby, no fever ensues. If, how-

ever, the bodily exercise be continued, until the action either of the general capillary system, or of that of some important organ, become deranged, fever will be the result. Strictly speaking, every morbific cause makes its primary impression on the nervous system; and, as the capillary system, by which is understood all that system of minute vessels in which the various secretions are elaborated, appears to be especially under the nervous influence, it would appear reasonable to conclude, that these vessels will first experience the impressions made on the nervous system by morbific causes. It is thus, that after an exposure to a cause, adequate to produce fever, the first manifest symptoms of its action are, generally, such as indicate a derangement in some part of the general capillary system. After the capillaries of one or more important organs have been thus disordered in their functions, the heart and arteries are drawn into irregular action, in consequence both of the internal congestions from the torpor of the cutaneous capillaries, and of the irritating qualities which the blood has, by this time, acquired from the previous functional disorder of one or more of the emunctories of the system.

Our author's account of the symptoms of typhus is methodical and clear, and evidently drawn from much close observation. We shall not, however, follow him in this part of his essay; and merely quote his observation concerning the peculiar odour emitted by persons sick with this fever. "There is a remarkable odour," he says, "arising from persons affected by this disease, so peculiar, that I feel assured, that upon entering a room blind-folded, where a person had been confined for any length of time, I should be able to distinguish it from all other febrile affections." We shall here introduce an observation of Wedekind, in relation to a particular appearance of the tongue in this disease, which he calls the *lingual symptom*, (Zungenzeichen) and to which he attaches a great deal of importance. This appearance of the tongue, he says, is an infallible mark of the disease's having passed from its primary stage into that of confirmed febrile excitement. "The tongue," he observes, "becomes at first of a

colour approaching to a rose-red, is smooth, and generally not coated. When, at the request of the physician, the patient puts out his tongue, a white, but quickly disappearing streak, may be noticed, at the instant it is thrust forward between the teeth; being occasioned by a slight pressure of these on the tongue as it passes out betwixt them, just as we perceive a white but transient spot on pressing a finger gently on an inflamed erysipelatous surface." The tongue, in fact, he says, is in such cases affected with a slight superficial erysipelatous inflammation. Before this symptom appears, he regards the disease as not yet contagious. He considers this appearance of the tongue as the most certain indication of the transition of intermittents, bilious remittents, dysentery, &c., into a low or torpid state.* Etmuller says that in typhus, a tumefaction of the uvula almost is universally present; and Wedekind seldom found this symptom absent after the disease had run on for some days.

With regard to the value of medical treatment in typhus, Dr. Smith holds sentiments which we cannot advocate in their full extent. No treatment, he believes, is adequate to interrupt its course, when once completely formed. "During the whole course of my practice," he says, "I have never been satisfied that I have cut short a single case of typhus, that I knew to be such." We do not know how to reconcile this observation with the facts which the Doctor himself has recorded from his own experience, in the latter part of his essay. He there gives an account of three cases of typhus, which, from the most unpromising state—without the least indication of an approaching abatement in the disease, were brought very unexpectedly to a state of convalescence in the course of twenty-four hours, by cold affusions.

But we shall speak of these cases in another place. Dr. Smith is convinced not only that we cannot cut short the course of typhous fever, but also, that "*all* powerful remedies or measures adopted in the early stage of the disease,

* Op. jam Citato, p. 56.

are liable to do harm." It does not follow, however, he observes, that because we cannot cut short its course, we should neglect to resort to remedial treatment. "In cases of the other contagious diseases, which are destined to run a certain course, as the small pox, we often prescribe early in the disease, and with evident good effect, but not with a view to stop or cut off the disease." And, on the other hand, he observes, "it does not follow of course, that this disease in all cases requires remedies, or that a patient should necessarily take medicine, because he has the disease."

It is obviously of the utmost importance to form a correct opinion upon this point. He who believes the disease uncontroulable with respect to the term of its course, will make no effort to arrest it. Should his belief be erroneous, his treatment must be perniciously deficient. On the other hand, if it be true that the disease necessarily runs on to its natural termination, it would be evidently useless, and probably injurious, to employ any other than merely palliative means. From what we have ourselves seen of this disease, as well as from the testimony of other practitioners, we have been led to an opinion contrary to that of our author on this subject. We know that Dr. Smith is supported in his opinion by the testimony of some very eminent physicians. But the weight of authority is, we think, decidedly against him. We are, however, by no means prepared to maintain that typhous fever may, *in general*, be arrested in its course. But that there is nothing in the nature of the disease, as in small pox or measles, which renders such interference necessarily abortive, we are firmly persuaded. There has been much idle controversy concerning the propriety of taking the cure of fevers out of the hands of nature, as it has been expressed, and whether it be not better to watch the movements of nature, and give succour to her sanative efforts. Here, as in most other things, the extremes are to be avoided. The physician who, in the treatment of fevers, neglects the admonitions of nature, and disregards her opera-

tions, resembles the mariner who would conduct his vessel in safety over the ocean, without attending to nature's indications of approaching storms and calms. But on the other hand, he who remains a mere passive spectator to the efforts of nature in fever, and applies feeble and inadequate remedies, under an idea that medicine can do but little good, resembles the sailor who would expect the winds to waft him to his destined port, without plying his rudder, or shifting his sails.

In no disease are there such opposite plans of treatment recommended by different physicians, as in the present one. Those who regard the disease as idiopathic, connected, essentially, with a debilitated state of the vital powers, employ, of course, tonics, stimulants, and whatever other measures may be supposed suitable to the support of the system. Those, on the contrary, who believe the fever to be symptomatic of primary local inflammation, or who regard it as a disease of general increased excitement in its first stages, look upon bleeding and other antiphlogestic measures, as the appropriate means of relief. "It is remarkable," says Dr. Smith, "that though the practice of these two sects, for such they seem to be, is as opposite as possible, each considering the other's mode of treatment as highly deleterious, yet all boast of success, and enumerate various cases which have fallen under their care, with scarcely the loss of a single patient."

Although the results of these opposite modes of treatment do not seem to differ much, yet on comparing the reports that have been published in reference to this subject, it may be seen that the superiority of success is, in general, not on the side of the bleeding practice. Dr. Mills, one of the most zealous of the phlebotomists, informs us, that out of nine thousand one hundred and ninety-five typhous patients received into the Dublin fever hospital, and who were chiefly treated by blood-letting, seven hundred and forty died, making the proportion of death nearly one in eleven. Dr. Stocker, an eminent Irish practitioner, has shown from hos-

pital documents, that the success of other practitioners who treated this disease *without* general blood-letting, was greater than that of Dr. Mills, they having lost one in twelve, whilst Dr. Mills lost one in eleven. Dr. Stocker, who treated the disease without bleeding, affirms, that in his own practice he lost but one out of ninety-six.* The observations of Dr. Smith on this head, appear to us very judicious. "That patients often recover from this disease," he remarks, "after blood-letting has been practised, is an unquestionable fact, and the inference which should, perhaps, be drawn from it, is, that the loss of a moderate quantity of blood in typhus, is not of itself dangerous, and, in a majority of cases, may be allowed with impunity. There are cases, however, in which it may be essential to the patients' safety, while in others it may prove highly injurious. The judgment and skill of the physician is necessary in each individual case to determine the propriety of its adoption, as well as the quantity which should be abstracted." He has not found that bleeding does often produce any change in the disease, or that the pulse is rendered slower thereby. The symptoms which he regards as an indication for bleeding, are "uncommon pain in the head, attended with great heat of the part, a sense of fullness and throbbing of the temporal arteries, or marks of congestion in the viscera of the thorax —such as pain in one or both sides of the chest, increased by a full inspiration." He has never seen bleeding beneficial when the pulse was very frequent.

Much has been said of late, concerning the utility of bleeding, in what Dr. Armstrong calls the congestive form of typhous fever. In such cases, it is said, "the energies of the system are either nearly extinguished, or so much oppressed as to be unable to create an universal excitement." This prostrated state of the system is *caused*, according to Dr. Armstrong, by the accumulation of blood in the veins of the internal organs. He states that on examining the bodies of

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* Dublin Hospital Reports.

persons who have died of the congestive form of typhus, the veins of the principal organs are found in a turgid state. But, as Dr. Clutterbuck very justly, though not much to the advantage of his own hypothesis, observes, "we have no right to infer the state of the vessels during life from their appearance after life has ceased." Be this as it may, it is by no means ascertained that such congestions, if they do exist, are the *cause* of the accompanying prostration; on the contrary, it would appear, we think, much more probable that they are the *consequence* of the depressed state of the vital powers. Nor are there sufficient grounds for asserting, that the internal accumulations of blood, in cases of this kind, are confined to the venous system, this being as likely to occur in the arteries as in the veins. The engorged condition of the veins after death, is no certain evidence of their having been in this state before death. It is well known, that in almost all post mortem examinations the arteries are found to contain very little blood, whilst nearly the whole mass of this fluid is found in the veins. "How a state of *venous* congestion can take place," says Dr. Clutterbuck, "combined with a deficiency of arterial action, it is not easy to conceive, nor is any explanation attempted. There are but two modes in which an unusual quantity of blood can be accumulated in the veins; one is, an additional quantity being propelled into them by an increased action of the arteries, in consequence of which the corresponding veins are generally observed to be more distended—the other is some obstruction of a mechanical kind to the return of blood to the heart. The former of these is expressly denied by Dr. Armstrong, and of the existence of the latter no idea appears to be entertained." There is an evident inconsistency between the principles and practice of Dr. Armstrong on this head. He asserts that the prostration arises from a disproportion of blood in the arteries and veins; it is accumulated in the venous system. To equalize the circulation, he directs bleeding. Now, when a ligature is put on the arm and a vein opened, nearly all the blood which flows must evidently come from the side of the arte-

ries. But, as according to Dr. A.'s hypothesis, there is already a deficiency of blood in the arteries, it does not seem likely that such an operation would prove advantageous. Bleeding certainly sometimes raises a small and oppressed pulse to a full and active one. This occurs, when the system is really oppressed, when the power of the heart is not *impaired*, but *impeded*, by an inordinate accumulation of blood in the central parts of the vascular system.

We shall pass over our author's views concerning the employment of emetics, cathartics, diaphoretics, mercury, &c. in the treatment of this fever; and conclude this article with an account of what he says concerning the utility of cold effusions in this disease. The mode in which he uses the external application of cold water, when the patient is too weak to be taken out of bed, is "to turn down the bedclothes, and to dash from a pint to a gallon of cold water on the patient's head, face and body, so as to wet both the bed and body linen thoroughly. When the linen and bedclothes begin to dry, and the heat begins to return to the surface, the water should be again applied, and in this way the heat may be kept down to a natural standard, or rather below, on the surface." Dr. Smith relates three cases, in which cold affusions, applied in this way, produced the most unequivocal good effects. The first case was that of a young man sick with this fever, and who had been bled before the doctor saw him." The fever was severe, and the symptoms increased for several days." He was put into a warm bath. "He was a little delirious before he went into it, and when he came out he was raving. From this state, he sunk in the course of the next night into a low muttering delirium, with a great degree of coma and starting of the tendons, and with scarcely ability to swallow. His pulse was irregular, but still possessed some force, and his heat was above natural. Twenty-four hours were passed in this situation, without any symptoms of amendment." The next day he was stripped naked and laid on a straw mattress, and a gallon of cold water poured over him from head to foot. The affusion was repeated as often as he began

to grow dry and warm. In the evening his pulse did not intermit as often as before, and the heat was much diminished. He was put into a dry bed and a dose of opium and musk administered to him. On the next day the affusion was repeated, so as to keep down the heat. Before night, the patient recovered so as to speak; called for more water to be thrown on him. From this period he became convalescent, and recovered without the use of another remedy. The second case was that of a strong robust man, aged between thirty and forty. "He had been sick about a fortnight: his head was not much affected, but the heat of his body was great and his thirst urgent." The doctor saw him in the evening. The patient was stripped, and about a quart of cold water sprinkled over him. "The sheet was then thrown over him, and the water applied as often as he became dry and the heat began to return. After the first application of the water, that parched sensation of the lips and mouth which urged him to drink so much, abated, and he lay the whole night without any desire to drink." *The next day he became convalescent,* and he recovered without medicine.

The third case mentioned, was that of a robust man who had been sick two weeks, when the doctor first saw him. His pulse was frequent, his heat great, and his mouth exceedingly parched. His feet were very cold. The cold affusions were applied over the head and breast, and repeated so as to keep down the heat. He became convalescent the next day, and recovered without any further medicine.

We cannot help again remarking, that these cases are in manifest opposition to our author's sentiments, concerning the possibility of cutting short the course of this disease. There is not the least reason for supposing, that in any of these instances, the disease would have terminated as soon as it did, if the cold affusions had not been applied. In the two last cases, the patient suddenly convalesced, although on the preceding day, and before the application of the cold water, there was not the least hope of a speedy amendment. If the cold affusions produced the sudden favourable change, what reason

is there for denying that the disease was cut short in its course? To us, and, we apprehend, to the majority of our readers, it appears quite manifest that our author's doubts on this head are not justified by the result of his own experience. E.

ART. V.—*Ideen zur Diagnostick. Angefangen von* J. E. WICHMANN; fortgesetzt von WILHELM SACHSE, grossherzogl. Mecklenburg, Schwerinschen, Leib und Medicinalrathe, &c. Viertter band 8vo. pp. 266. Hanover.

Ideas on Diagnosis, &c. &c.

The Germans have been long distinguished for their zeal and industry in the cultivation of medicine; and, it must be acknowledged, that they have contributed their full share to the general stock of medical improvement. To those, however, who are accustomed to pursue the plain course of observation and induction, there is something exceedingly irksome and unsatisfactory in that vein of subtle and abstract speculation which runs through the majority of their theoretical disquisitions. The spirit of the Kantean school had, at one time, infused itself, intimately, into their medical speculations; and it is only of late that they are again emerging from that mist of Idealism, to follow the light of the Baconian philosophy. For extent of learning, patience of research, and closeness and accuracy of observation, the German physicians stand unrivalled. Their writings abound in valuable materials; but their theories have been too often the offspring of an unrestrained imagination, rather than of a rigid logic.

There is another peculiarity belonging to the medical writings of the Germans, which has a tendency to perplex and fatigue the mind of the reader, without, at the same time, contributing to any useful or practical purpose whatever. We allude to the minute and unessential distinctions and divisions which are so common in their pathological descriptions. This useless refinement is, however, evidently declining among them, and a spirit of experimental research, and of sound philosophical generalization, is becoming more and more preva-

lent. Among the late medical publications that have issued from the German press, there are many that might be adduced in testimony of this remark. The work, whose title stands at the head of this article, is one which deserves this praise to the full extent.

In 1794, Dr. I. E. Wichmann published two volumes on diagnosis, which were very favourably received by his countrymen; and, in 1802, he brought out an additional volume, containing much interesting matter on this important subject. The present volume, by Dr. Sachse, is intended as a continuation of this valuable work; and from an attentive perusal of it, we are led to regard it as an accession of no ordinary value. Dr. Sachse's object, in the present volume, is to give an accurate and comprehensive view of the symptoms and causes of two varieties of phthisis—*phthisis laryngea* and *phthisis trachealis*—and to establish between them a correct diagnosis. After making some general observations on *tracheal* phthisis, he gives a full and satisfactory description of the causes and symptoms of phthisis laryngea. He relates the history of four cases of this disease, from his own observations, and of one which occurred in the practice of Dr. Fabricius. The descriptions of these cases are intermixed with instructive references to the statements of other writers, particularly of Thomann and Cheyne, in relation to this form of phthisis. In the beginning of this affection, there is hoarseness, tickling in the throat, a dry cough, slight and apparently of no consequence at first, but increasing gradually in violence, becoming at last shrill, harsh, ringing and barking as in *croup*, and attended with a puruloid and fetid expectoration. In the more advanced periods of the disease, there is pain felt in the larynx on swallowing; and the author noticed, in a few instances, that the tongue was covered with a yellowish slimy coat, on the side the pain was felt, while the other side remained perfectly clean, and of a red colour. Towards the end of the disease the root of the tongue generally becomes swollen and red, and the papillæ large and prominent. Among the predisposing causes of this disease are mentioned

scrofula, syphilis, an arthritic and hæmorrhoidal habit, chronic croup and catarrh.

In the second section, the symptoms and character of *phthisis trachealis* are minutely detailed. The symptomatology of this variety of tracheal consumption was very imperfect, until the appearance, in 1820, of Cajol's *Dissertation sur la Phthisie Tracheale.* This writer, bringing together the most important facts recorded in the dissertations of Sauvé and Petit, and collating them with those which he himself observed, has drawn up a very clear and interesting description of this disease. From this, and other authentic sources, as well as from his own observations, Dr. Sachse has furnished us with a full and instructive account of this malady.

Among the varieties of tracheal phthisis, Dr. S. mentions one which arises from the pressure of encysted and indurated tumors on the upper part of the wind-pipe. He does not mention an *elongated uvula*, as a cause of this disease, although its origin from this source is not unfrequent. Dr. Physick has cured cases of this kind, simply by cutting off a portion of the uvula, and thereby removing the irritation produced by it in the epiglottis. Wiseman, surgeon to Charles II., mentions cases of this sort, which he cured by the same operation. "There happeneth," says this writer, "*an elongation of the uvula*, through the abundance of salivous humors flowing upon it, in which case, if it touch upon the root of the tongue, or upon the epiglottis, it causeth a frequent hawking, and in progress maketh a *vexatious catarrh.* Such was the case of a servant maid to a noble lady in the country. Various medicaments had been prescribed ineffectually. I being in that family, was desired to see her. Looking into her mouth, I saw the uvula hang dangling upon the root of the tongue. It was not swelled nor inflamed. I, supposing it the cause of her distemper, took hold of the lower part of it with my forceps, and at the same time cut it shorter with a pair of scissors, and she was thereby freed of her disease. Such another case I cut off in a servant of his majesty, and

some others, who were thereby freed from their distempers, when all other remedies failed.*

But to return to the book before us. The diagnosis between phthisis *laryngea* and *trachealis*, has been accounted very difficult. This difficulty is, however, much diminished by the very minute and lucid diagnostic description which our author has given of these two forms of phthisis. We annex a translation of what he says on this head.

PHTHISIS LARYNGEA.	PHTHISIS TRACHEALIS.
VOICE.	
The voice is hoarse from the commencement, and increases with the progress of the disease; it becomes weaker, scarcely audible, and often entirely extinct.	The voice is little, or not at all altered; the patient, more than the persons about him, perceives that it is less clear; he makes frequent efforts, by hawking, to remove the cause of the irritation, which he refers to where the trachea enters the chest.
The speech, although sufficiently loud when the patient begins to speak, soon becomes weaker, and does not excite cough, or any distortions of the countenance indicative of pain; nor is it attended by sneezing, or a frequent sighing inspiration.	The speech is attended with that kind of roughness which is peculiar to many persons in health, resembling a good deal that roughness of voice which drunkards are apt to have.
There is a peculiar difficulty in uttering the first words, after rising in the morning.	The voice is alike throughout the whole day. Different positions, however, by varying the pressure on the affected parts, may produce some change in it.
PAIN.	
The pain is felt in the larynx, which the patient is apt to feel and press; it sometimes extends to a short distance downwards, but more often up into the fauces.	The pain is situated in the trachea near its bifurcation; it seldom extends upwards, but frequently downwards into the bronchia, especially directly behind the sternum, but not often to other parts of the breast, unless the affected part of the trachea is of sufficient extent to propagate its irritation to the lungs.
When the disease arises from a tumor, or other cause, pressing upon or irritating the upper part of the larynx, a tickling sensation, alone, is at first felt, which, in the progress of the disease, becomes more unre-	The pain is rather of a heavy and pressing character, as if something were pressing from the breast upwards. When, however, in the latter stage some of the cartilages become dissolved, or when the disorder arises

* Eight Chirurgical Treatises. By Richard Wiseman, Vol. II. p. 36.

PHTHISIS LARYNGEA.	PHTHISIS TRACHEALIS.
mitting, violent, stinging, cutting, or as if a foreign body were lodged in the larynx.	from an external cause, the pain is severe and piercing.
The pain is increased by coughing.	In this variety also.
——————by external pressure.	—— but very little.
——————by the inhalation of irritating vapours.	——very little increased.
It is increased by tempestuous weather.	——scarcely.
——————by heating medicines.	——here also
——————by speaking, riding in carriages, and swallowing.	—It is increased by bending the head backwards, or by turning it round.
It is increased by gargling in infusion of mustard, or vinegar and water.	——not at all.
——————by breathing the cool air of night with open mouth.	——not at all.
The pain is lessened by inhaling emolient steams.	——not at all; but by bending the head forwards.
The pain seldom abates.	There are considerable remissions.

COUGH.

A sensation of tickling precedes each spell of coughing.	No tickling before the spell of coughing comes on, but a disposition to hawk.
The cough is increased by the use of irritating gargles, by inhaling vapours, impure or cold air, and by the use of acids. It is not increased by motion, if a cloth be held before the mouth.	Not increased by these things; but easily excited and increased by bodily motion or exercise.
The cough is generally violent in the morning, until something is expectorated, and is more or less troublesome during the whole day. Like spasmodic cough, it will sometimes subside for a considerable interval—and then return with increased violence, being, in this case, usually preceded by a fit of sneezing.	Slight and frequent coughing during the whole day, becoming at last so constant as to prevent sleep at night.
The cough is sounding, shrill and grave, or acute and ringing, especially during inspiration. The inspiration during cough is stridulous, as in croup or whooping-cough.	Not ringing, but deep, hoarse, and attended with a rattling noise, as in bronchitis; inspiration is not stridulous.
The spells of coughing are sometimes exceedingly violent, when excited by external irritants, such as much speaking, drinking rapidly, inflammation in the neighbourhood of the tracheal ulcer, small pieces of loose pseudo-membrane, or of cartilage. Violent attacks of coughing occasion extreme exhaustion.	There are occasional attacks of coughing of considerable violence, ending in a kind of choking and vomiting. These spells of coughing are extremely harassing, and are attended with pains in the breast.
Cough is excited in the first act of swallowing, so that the food, when	Cough is excited when the food has already descended as low as the

PHTHISIS LARYNGEA.	PHTHISIS TRACHEALIS.
the patient first attempts to swallow, is generally thrown back again. During the act of coughing, the patient is apt to put his hand to the larynx. Expectoration lessens the violence of the cough.	sternum. It seems, at first, as if the cough and vomiting were excited only by quick and careless swallowing; but in the advanced periods of the disease, the most cautious swallowing will excite coughing. On coughing, the patient puts his hand to the throat, near the breast. Expectoration brings no relief to the cough.
During the act of coughing, there is no strong motion of the bones of the chest.	There is strong motion of the bones of the chest in coughing.
The cough is less severe at night, when in bed, but is increased on rising. Towards the termination of the disease, it can only be calmed by opium.	It is increased by lying down.

EXPECTORATION.

The quantity expectorated is generally very trifling, compared with the violence of the other symptoms.	It is more abundant, partly on account of the greater quantity of pus secreted, and partly from the mass of bronchial mucus united with it. When an abscess breaks into the trachea, the expectoration suddenly becomes very copious.
Expectoration more purulent. In the morning it is thick, being thrown out in small dense masses. During the day it is frothy. In the latter stage of the disease it has a bad smell and taste.	More like saliva, ropy, mixed occasionally with opaque streaks that sink in water. (Cajol S. 62. Ob. IV. S. 33.) Corvisart's patient did not expectorate pus until within three weeks of his death. When glands are involved in the disease, the matter thrown up is sometimes brownish, mixed with a few white points. Even when the expectoration is yellow, opaque and fetid, as it generally is towards the end of the disease, it continues to be mixed with a large quantity of watery, frothy fluid, out of which the pus sinks like yeast.
It is seldom, yet sometimes, bloody.	
It is occasionally mixed with shreds of false membranes, particularly after inflammatory attacks, as has been noticed by *Portal*, *Frank*, and myself. It is sometimes, also, mixed with small pieces of true membrane.	Mixed with shreds of membrane, consisting mostly of separated portions of the lining membrane of the trachea.
It is sometimes mixed with portions of separated cartilage, having a shape corresponding with the ulcerated and thickened part of the larynx.	Mixed with cartilaginous portions, having more of an annular form. *Portal* doubts this, v. 2. p. 55. I quote in support of it Riverius, Op. Omn. p. 51. Aretaeus Op. p. 86, also Paulin.
As to the manner of expectorating, it is to be observed, that the matter	The patient refers to the part where the trachea enters into the

PHTHISIS LARYNGEA.

does not seem to come from within the breast, but it is brought up by a kind of hawking, and with an action of the larynx, which shows it to come from this part. Thomann relates the case of a patient, *qui continuo excreavit sine tussi sputa puriforme. P.* 166—68.

PHTHISIS TRACHEALIS.

breast as the source from which the matter comes.

RESPIRATION.

Respiration becomes more and more difficult, and at last is constantly performed with painful exertion, and becomes croupy. The patient is nevertheless able to lie down or to walk about, and even to ascend heights, provided he keep his mouth closed. However difficult the respiration is, the breast remains free, and can be completely filled with air, if a spasmodic contraction of the glottis does not prevent its passage into the trachea. Attacks of threatening suffocation sometimes come on, but this happens during coughing or swallowing, and ceases as soon as the food or mucus is thrown up.

Respiration is always more or less affected; occasionally, it becomes alarmingly difficult, allowing the patient to breathe only in an upright posture. These attacks come on suddenly, last some hours, but do not keep pace in their violence with the general progress of the disease; so that the patient is often less troubled with them in the latter, than in the early periods of the complaint.

The acts of inspiration and expiration suffer an interruption before they are completed.

Breathing is not interrupted by a spasmodic action of the glottis.

The respiration is whistling—always anxious—often audible at a considerable distance, and tremulous, especially during inspiration and immediately after a spell of coughing.

The sound, in this variety, is also unnatural, but more rough; rattling, as in bronchitis, and proceeding from within the chest. This rattling sound is, however, heard only during the spells of coughing, and it is then audible at a considerable distance. In the latter period of the complaint, the breathing sounds as if the windpipe were pressed upon by an aneurism.

The difficulty of breathing is continual, though somewhat abated during the day. It is particularly difficult at night, and in the morning, and when the head is thrown backwards.

Not more difficult in the morning than during the day.

At the end of the volume the author has given engravings, representing the pathological preparations of the ulcerated and thickened parts of the affected organs. E.

ART. VI.—*Essays on Phrenology, or an inquiry into the principles and utility of the system of* DRS. GALL *and* SPURSHEIM, *and into the objections made against it.* By GEORGE COMBE; with notes and additions (*by the American Editor*) comprehending memoirs on the anatomy of the Brain, and on Insanity. Philadelphia, 1822. Octavo, pp. 462.

MR. COMBE has here given us a very ingenious exposition of the doctrines of Gall and Spursheim, and we must do him the justice to confess, that he has invested them with a degree of plausibility, of which we did not suppose them susceptible. The defence of this system could not have fallen into abler hands; he has brought into view all that can, perhaps, be reasonably offered in its support, and parried the objections urged by its opponents with much adroitness.

——————Si Pergama dextra
Defendi possent, etiam hac defensa fuissent.

We cannot, however, say so much in favour of the contributions to this volume by the American Editor, who, though animated with an abundance of zeal, has adduced nothing calculated to give additional support to these doctrines. Indeed, we apprehend that the disciples of Gall can feel themselves under no strong obligations to this writer for his earnest efforts to confirm and elucidate their doctrines; for, if we mistake not, much of what he says, in the way of argument, is calculated to bring ridicule and discredit on this system. The zealous editor himself, indeed, does not seem to be without some misgivings of this kind. He bewails, with becoming sensibility, the wounds which ridicule delights to inflict on those who suffer their zeal to outstrip their understandings. To be laughed at is, certainly, not very amusing; and yet it is not always in the power of gravity to contain itself, when absurdity stares out from under the borrowed mantle of philosophy. It is not, however, our intention to laugh at the general principles of the doctrine itself, or at its advocates. The love of truth and free enquiry forbid us such merriment. But we cannot promise to observe the same decorum

towards some of the arguments employed on this subject. Indeed, we are quite satisfied that were Democrites to rise from the grave, and hear our editor rehearse a few of his "proofs," he would, as old Burton expresses it, "break the rim of his belly with laughing."

The circumstances which first led Gall to the study of phrenology, were the following: He had, in his youth, a companion who could remember *words* far better than he himself could, and this companion had prominent eyes. Another of his companions could remember, "where, in his boyish days, he had found *bird's nests*," and this person had no prominent eyes, but a most magnificent bump "at the upper part of the internal border of each eye-brow." Next, he met with a woman who also had this bump, and he learned "that her greatest pleasure consisted in travelling." Pursuing his investigations, he lit upon a preposterously proud beggar, and this beggar was furnished with a protuberance on the posterior and upper part of his head. "Thus furnished with so many proofs of the coincidences between the developement of different parts of the brain, and the display of the intellectual and moral nature of man, Gall was compelled to renounce the obscure and incomprehensible doctrines of the schools, and applied himself to the study of the primitive faculties." Having given this account of the origin of phrenology, the editor notices some of the objections that have been advanced against this system, and proves, in opposition to every thing that might be said to the contrary, that a man could not think without brains. This, and a few other points of a similar character, being settled, he passes on to the consideration of the facts, which, in his opinion, establish the existence of a *plurality of organs* in the brain. That the reader may not be deprived of the full benefit of our editor's demonstrations upon this point, we will quote his arguments in his own words. "The *analogies of nature*, (he says) and the operations of the mind, all *go to prove* the brain's being divided into different organs. Each salt and mineral has its peculiar crystallization: each kind of tree is differently organized, as

also its different parts—the wood, the leaves, flowers, and fruits. The organization of each animal is equally modified, and in the same animal each function is attached to a particular organ, as the heart to circulate the blood, the lungs for respiration, &c." Analogy is a dangerous mode of reasoning. According to our apprehension, at least, the "analogies of nature," here adduced, serve quite as well to prove that the moon is made of green cheese, as, that the brain is divided into different organs. "Each salt and mineral (he says) has its peculiar crystallization;" and this is one of the analogies which *go to prove* the brain's being divided into different organs." Thus, to be more specific, glaubers' salt crystallizes in six-sided prisms, *ergo*, the brain is divided into different organs. Again; a peach-tree is organized differently from an elm, *consequently*, the brain is divided into different organs. This is delightful, and cannot fail to dispel the doubts of the most obdurate sceptic. We may remark, by the way, that the editor's confidence in the validity of arguments upon this point, is not at all in accordance with the opinion expressed by Mr. Combe, in a subsequent part of this book. "No argument, (says Mr. C.) can be offered to prove the existence of any faculty, or the organs of it. Every faculty and organ which are stated as ascertained, have been admitted only after an extensive series of observations of concomitance between the manifestations and developements."

Not satisfied with the above cogent analogical proofs, our zealous phrenologist, the editor, goes on to exhibit the "*direct proofs*" of a plurality of organs in the brain. "These (he says) are furnished by the actions of man and animals in a state of health and disease. As respects the latter, (animals) their brains *must* differ in the *totality*, since the qualities of these animals, depending, as we have shown, on the brain, are unlike. The beaver that builds a hut, the dog that hunts, the tiger crouching for his prey, the docile elephant, cannot have the same constructed brain. The different individuals of a species never possess the faculties in the

same degree; some are distinguished by their peculiar qualities, others are stupid—and, consequently, the organization cannot be equally perfect." This most notable specimen of logic deserves our particular admiration. What can be more conclusive than this: The brains of different animals differ in their *totality*—thus the brain of a bat differs in its totality from the brain of a horse, and, therefore, the brain is divided into different organs. We have a friend at our elbow, who insists that the philosophy of *Martinus Scriblerus*, is much more to the purpose; but we think otherwise. "A bird flies, (says Martinus) because it has wings, a duck swims because it is web-footed; and there can be no question but the aduncity of the pounces and beaks of hawks, as well as the strength of the crural and masseter muscles in lions and tigers, are the cause of the great and habitual immorality of those animals."

"If (says the editor) the brain were not composed of different organs, why do we find, in the scale of beings, that it is more complicated in proportion as the faculties are multiplied." To this imposing interrogatory we reply, that it is quite certain that the brain of a human being is not constructed like that of a dog, or a goose, but it does not follow that the brain consists of a congeries of organs. If the *intimate organization* of the brain of a human being, and that of an inferior animal, were precisely similar; and if mind and its operations were the effects, solely, of cerebral excitement, then, indeed, the difference betwixt the faculties of man and an inferior animal could only be explained by admitting that the additional parts of the brain of the former furnishes his additional faculties. It is not unreasonable to presume, however, that the *organization* of the brains of different animals itself, varies essentially; and there can scarcely be a doubt, that difference of organization—not external configuration, or mere developement—is the proximate principle of difference of functions in organs.

"In our own species (continues our phrenologist) we see, at an early period, in infancy and tender age, one part of the

brain well developed, while the other only becomes so at a later period. The first, composed of the upper and posterior part, enables them to show at once most of the passions which mark the more mature man, while it is only with the gradual and more perfect developement of the anterior portion, that the intellectual faculties are displayed, and assume a controling power over the former. Here, then, in the healthy state, we have two grand divisions of faculties and corresponding organic structure marked out." This argument is raised upon false premises. The assertion that "the upper and posterior parts of the brain are more developed in infancy than its anterior portion," is gratuitous. The fact is, that in infancy the whole brain is remarkably developed relatively to the other organs of the system. It is also, during this period, softer in its texture than in after life. The circumstance that infants manifest strong passions long before they reason, is explicable on principles much more consonant with nature than those offered in the above argument. The passions of an infant are those only which are common to all sentient beings. As soon as the infant is born it is capable of experiencing sensations. Infancy, as Bichat truly says, is the age of sensations. It is in this early period of human existence, therefore, that those passions which depend on sensations are displayed in a degree disproportionate to their power of reasoning. Thus the infant is capable of the emotions of anger and joy, because it is capable of the sentiments of pleasure and pain; and for the same reasons it is capable of desire and aversion. To the infant, almost every object it perceives is either a source of pleasure or pain. Its senses are infinitely more employed than they are in maturer age. Its incitements to anger and joy, desire and aversion, are therefore more numerous than at any other period during life. But besides these passions, which are necessarily coeval with the power of feeling, the infant has no others. Avarice, love, ambition, hatred, gratitude, and benevolence, have not yet taken a place in its tender heart. These are reserved to agitate the bosom of riper age. With regard to the *intellectual* faculties, nature

has appointed a different order of things. The evolution of the reasoning powers is necessarily gradual. At birth, the infant possesses none of the materials of thought. It has the faculties of reason, but it has not yet collected those simple ideas upon which these faculties are to be employed.—As the acquisition of ideas is gradual, so must be the developement of the intellectual faculties. To us, therefore, it does not appear very philosophical to resort to cranial bumps for an explanation of the phenomena referred to by our editor in the above specious explanation.

The following argument, though not very perspicuously stated, has been much urged by phrenologists, and it certainly possesses much greater claims to respect, than any of those we have noticed. "In the same person (says he) certain inclinations, and certain faculties, are manifested with much energy, others very feebly. One man may have much verbal memory, and little reasoning power; he may be a great poet, and no general; a good painter, and no mathematician. He may be devout, and either stupid or intelligent; each has his gifts—*consequently*, a *similar mass* cannot be adapted to all these functions." The brain is, without doubt, the organ through which mind operates; and it seems, therefore, just to infer, that the intellectual operations depend, for the degree of their excellence, on the greater or less adaptation of the brain to the perfect exercise of the mental faculties. But as this adaptation of the cerebral organ to the intellect,—or, in other words, as the fitness of the material organ to the exercise of the immaterial principle that resides in it, can depend on nothing else than on its intimate organization, it is evident, that if this organ be susceptible of modification in its intimate composition or structure, of which there can be no doubt, a correlative modification in the manifestations of intellect must obtain. The brain, by a peculiarly modified organization, may allow a more perfect display of some of the mental faculties than of the others, and thus establish original diversities and peculiarities of intellectual power. It is not necessary to admit, that a brain which is

well adapted by its organic structure, for the exercise of one of the faculties of the mind, must be equally well fitted for the display of the others. We may illustrate this by an analogy drawn from the modes of action of the external senses. Thus, some individuals have a lively perception of particular odours, which to most others are scarcely, or not at all, perceptible. Whence does this come? Shall we say, in imitation of the phrenologists, that the expansion of the olfactory nerve is divided into different organs, by which the impression of different odours is received and transmitted to the common sensorium? Or shall we say, as they do in relation to the brain, that if there were but *one surface* of nerve of a uniform structure, destined for the reception of the impressions of all odours, there could be no diversity in the power of perceiving smell? For our parts, we should say, that although the olfactory expansion be the general organ for receiving the impressions of every variety of odour, yet its organization is subject to such modifications as may render it peculiarly sensible to the impressions of certain smells, and, at the same time, perhaps, less liable to be affected by others. Proceeding in his arguments, our editor, in the next place, observes, "how can we, on the commonly received principles, account for the mind, fatigued with continued attention to one subject, applying itself to another with vivacity and pleasure. The plurality of organs explains this in the same way as when the eye is fatigued with looking at brilliant colours, or varied landscapes, and almost incapable of action, the ear will still be flattered by agreeable sounds." If the editor had employed this analogy, drawn from the external senses, as he ought to have done, he would have found in it an argument against, rather than for, the doctrine he advocates. As he tells us that the mind, when fatigued by long attention to *one* subject may apply itself with vivacity to another, he should, if he meant to adhere to a correct similitude, have made a reference to the well known fact, that the eye, when fatigued by looking a long time at *one* colour, will turn to another with delight. In this respect, the mind and the organs

of vision are perfectly similar. Would it not, however, be exceedingly absurd to say, that the retina must be composed of distinct organs, corresponding to the various primitive colours, because the eye, when fatigued by long attention to one particular colour, is "flattered and relieved" by looking at an opposite one? The absurdity is no less when the same thing is affirmed of the mind.

Partial insanity furnishes our editor with what he seems to regard one of his triumphant arguments. "It is *impossible* (says he) to reconcile the facts of partial insanity, or monomania with the notions of the unity of the brain. Some persons are, we know, only deranged on one subject, and display, in other respects, a consistency of conduct, and consequently a strength of reasoning, that would deceive a stranger." We do not pretend to reconcile the occurrence of partial insanity "with the notions of the unity of the brain;" but we conceive that it is equally irreconcilable with the phrenological notions of a plurality of cerebral organs. We most assuredly gain nothing by ascribing the occurrence of partial insanity to a morbid condition of some one of these supposed organs of the brain. Each organ, according to this system, is not confined in the exercise of its function to a *single specific idea,* but to an extensive class of notions. Thus the organ of *ideality* has the exclusive command of every thing relating to fancy, enthusiasm, and poetical feeling. Now, should we be told that the man who believes himself a plant, though correct upon all other subjects, labours under a disease of the organ of ideality, how, we might ask, can this organ, which forms such an infinite variety of ideas, manifest derangement on one particular notion alone, while in every thing else its operations are correct? Upon this subject we are again tempted to quote, with due seriousness, from the learned Martinus Scriblerus; and we do this the more willingly, as we feel a desire to do justice to the reputation of that renowned philosopher, by showing that he was, in truth, the original contriver of this wonderful doctrine of our phrenologist. "It is well known, says this erudite genius, that the

brain is divided into a congeries of glands; that a gland is nothing but a canal of great length, variously intorted and wound up together. Simple ideas are produced by the motion of the animal spirits in one simple canal; and when two of these canals disembogue themselves into one, they make what we call a proposition; and when two of these propositional channels empty themselves into a third, they form a sylogism or a raciocination. Memory is performed in a distinct apartment of the brain, made up of vessels similar, and like situated to the ideal, propositional, and syllogistical vessels in the primary parts of the brain. After the same manner, it is easy to explain why some people *think so wrong and perversely*, which proceeds from *bad configuration of those glands* Some, for example, are born without the propositional or syllogistical canals; in others, that reason, ill, they are of unequal capacities; in dull fellows, of too great a length."

After displaying the foregoing "proofs" of a plurality of organs in the brain, the editor goes on to refute the assertion which is sometimes made concerning the tendency of the doctrines of phrenology to fatalism and materialism. We shall not stop here to inquire whether this allegation be just or unjust. If the doctrines in question be true, their apparent tendency in this respect, can be no good reason for refusing them our assent. If they be erroneous, they must fall, and with them, all their sinister influence.

To the stubborn objection against the phrenological system, that persons have been known in whom the greater part of the brain was destroyed without their having manifested any particular deficiency of mental power, our editor opposes a few feeble observations of a general character. He prudently considers such cases as among the "exceptions which are wisely ordained by the Deity to make us feel our dependence and littleness," and "which make us exclaim—not all is faulty—but we know not all. What," he asks, "should we say to the flippant youth who, on hearing his professor explain the structure of the human frame, and the different parts

of which it is composed, as *all* necessary to health and perfect life, starts up and exclaims: Sir, you must be wrong. I have seen persons enjoy health who have not had all these parts you speak of." Why, truly, we should regard the professor who would make such a declaration a very great simpleton! Does our phrenologist pretend to say, that *every* part of the body is necessary to health and perfect life? A man may lose an ear, an arm, a leg, or his eyes, and enjoy health and life notwithstanding. But the man without eyes could not see, and one deprived of a leg would limp. Were the professor to say that the eyes are made to see, and the youth to exclaim: "Sir, you are wrong; I have known persons without eyes who could see perfectly well;" would we not laugh at the youth's absurd declaration? But does our editor, in the present instance, differ from the "youth" who should affirm such an absurdity? We are told that the brain is composed of a number of independent organs, each performing a function *which no other part of the brain can perform;* and yet, when we refer to cases where some of these organs were totally destroyed by disease, while the functions which are ascribed to them were nevertheless regularly manifested, it is insinuated that the function may have been performed without the existence of its specific organ. And, to crown the whole, this manifest contradiction is to be reconciled by the truly Socratic exclamation, "All is not faulty—but we know not all!"

After reasoning, as we have seen, with such prodigious acumen and cogency, the editor looks down from the summit of his conclusions with mingled sentiments of compassion and anger, upon the humble dissenters from his favourite doctrine, and bids them to look abroad on the world for demonstration of the correctness of phrenology! "Conviction," he foretells, "must be the result of such conduct. Then will they regret their former levity, and regard with *pity* and *sorrow*, the feeble attempts of those who substitute vague conjecture for observation, and ridicule the harmonies of nature." *Quis temperet á lachrymis?*

But it is time to leave the editor's *Preliminary Essay*, and to turn our attention to the more substantial portion of this volume, by Mr. Combe. The only way, observes Mr. Combe, in which the principles of phrenology can be demonstrated, is, by observing mental manifestations, and comparing them with developments of the brain. Before we enter upon an examination of the principles of this doctrine, we must advert to two objections which have been urged against this mode of philosophizing, and which our author oppugns with considerable ingenuity, though not, we think, with success. In order to establish the adequateness of this mode of inquiry, it must be shown, as has been observed by others, that the actions of men are in general the correct exponants of their faculties and propensities; and that the "true development of the brain can be discovered by observing the shape of the head." In relation to the first point, Mr. C. observes, that the "vulgar" in all ages, and in all nations, have entertained the opinion, "that men in their actions generally manifest their true faculties," and that "the faculties are permanent and uniform natural powers." The "vulgar" he says, have always had a correct practical knowledge of the philosophy of Gall and Spursheim upon this point, while the metaphysicians have been erring for two thousand years." Although not disposed to give full credence to the maxim of Bacon, "quod vulgo videtur verum, falsum est," or to maintain with him, that, "non est judicium in vulgo," we nevertheless confess, that, in the present instance we lack confidence in "vulgar opinion." The deceitfulness of man is, at least, as proverbial as the direct relation between his actions and propensities. "*The heart is deceitful above all things;—who can know it?*" This was the sentiment held in the days of the prophets; and it does not appear that human nature has as yet undergone the least change. Who, indeed, that has observed mankind, and looked into his own bosom, has not had the painful conviction forced on him, that dissimulation seldom permits the real sentiments and motives of the heart to be seen?

> ————There are soft smiles and gentle words,
> And there are faces skilful to put on
> The look we trust in—and 'tis mockery all!

It must also be observed, that religion, education, and a thousand extrinsic circumstances, may evolve, excite or subdue propensities, and exercise a powerful influence over the conduct of men. Are there not, in fact, whole societies, who, by the influence of their peculiar tenets of religion, have so subdued some of the dispositions of the heart, as to lead one who should judge from their actions alone, to believe that they did not possess them? Would any one, judging from the actions of that exemplary sect, the Friends, suppose that they were furnished with the "organ of combativeness?" And yet, if such an organ exist, there is no reason why it ought not to be found as frequently with them, as among the members of other sects. It does not, therefore, appear to us so easy to ascertain propensities from observing actions, as the author, and, according to him, the "vulgar," seem to think.

Admitting, however, that the propensities may, for the most part, be ascertained by observing the conduct of men, and that the true development of the brain may be discovered from the figure of the head; there are still strong objections against the sufficiency of this mode of philosophizing, to the establishment of the phrenological doctrine on a satisfactory basis. Let it be granted that a correspondence between particular developments and dispositions frequently exist; does this justify the conclusion, that the latter are necessarily dependent on the former? There are other coincidences of disposition and external appearances recorded, as remarkable as those upon which the system of phrenology rests. In a late English journal, it is stated that "John Lomas, who was hung for the murder of Mr. Morrey, in 1812, had *light hair*, *light eyes*, and a remarkable fair complexion. M'Ghinnis, for the attempt to murder Mr. Birch, of Stockport, in 1819, had *light hair*, *light eyes*, and a fair complexion; Samuel Fallows, for the murder of Betty Shawcross, at Whaley, had *light hair*

and light eyes. The governors of several of the principal prisons in this country, (England) have remarked, that in all cases of murder, and particularly in those which have been attended with circumstances of cruelty, the perpetrators have invariably had *light blue eyes and light hair.*" If mere coincidence of external appearance and propensity is to be taken as a sufficient foundation for the erection of a doctrine in relation to this point, we see no good reason why we may not as well ascribe the propensity of murder to the influence of light eyes and light hair, as to that of a particular elevation of the cranium, situated above the ears.

The confidence which seems to be reposed by phrenologists, in the inferences they draw from the concomitance of particular mental powers and cranial configurations, does not accord with some concessions which they are forced to make on this head. "We must keep in mind," says Mackenzie, "that the functions of the brain are affected by what medical men call *temperament.* Should we meet with a person who appears to have the higher faculties well developed, but in whom they are not so conspicuous, *we may be certain that there is something in the general constitution that affects the organs*, and this may sometimes be conjoined with neglected education."—(277). If, as is here stated, *temperament*, or constitutional disposition, can convert a person furnished by nature with large organs of intelligence, into a mere simpleton; or form a genius—ex quovis ligno—out of one deficient in these organs, what should prevent us from accounting, in the same manner, for the possession of particular dispositions and mental powers, when we find them accidentally associated with particular bumps on the cranium? When we meet with a person remarkable for a particular disposition of mind, possessing a certain bump on his cranium, why may *we* not as justly conclude, that the peculiar disposition is the result of *constitutional temperament*, and not of the supposed organ indicated by the bump, as do the *phrenologists*, when they find a person who has the same propensity, without this cranial protuberance? We are by no means dis-

posed to admit that mere temperament can have so extensive an influence. We make these observations, only to show the doubtful character of the inferences which are drawn from comparisons instituted between mental qualities and cranial structure.

A faculty, as defined by Mr. Combe, is "a power or capacity, which has innate functions and activity." The mind, according to the phrenological system, is composed of thirty-three faculties, and these faculties are said to reside in distinct and specific portions of the brain, supposed to constitute their appropriate organs. It is, moreover, maintained that the activity and energy of a faculty is proportionate to the volume or development of its *organ*, or of the peculiar section of the brain in which it resides; and that each faculty forms, recals, and combines a specific class of ideas, in a manner altogether independent and distinct from the others. According to this system, indeed, each faculty "appears to be a distinct mind, endowed with its own constitution, relations and laws." To this hypothesis, Mr. Combe anticipates an objection, which seems to us of much more weight, than he appears to be willing to acknowledge. If, as it is imagined, the mind be composed of a number of independent and essentially distinct faculties, how are we to account for the unity of consciousness? Mr. Combe does not pretend to clear up this powerful objection against the doctrines he advocates. He appears to consider it quite sufficient to observe, that "Gall and Spursheim avow themselves utterly unable to give any satisfactory explanation of the difficulty how consciousness comes to be single, while the instruments of thought are numerous."

There is another difficulty which occurs to us, upon this point, and which is, we think, quite as insuperable as the preceding one. *Judgment*, in the proper sense of the term, is said to be an attribute of the *reflective* faculties alone—that is, of the faculties of *comparison*, *casuality*, *wit* and *imitation*. All judgments, founded on comparison, are, therefore, formed in the organ of *comparison*. Now, it would appear to be necessary, that before a faculty can be employed upon

an object, a perception or consciousness of the object itself, must exist in the faculty. For no judgment can be formed of the relation of things, if no ideas of the things themselves are previously obtained. When, therefore, we compare a cube with a parallelopipidon, for instance, the organ of comparison alone, say the phrenologists, judges of their analogy. But the analogy between two such bodies, considered as geometrical figures, exists in their *forms* and *number of sides.* Now, the ideas of *form* and *number*, we are told, are formed, and, as it were, incarcerated in the two distinct and independent organs of FORM and NUMBER, and hence the organ of *comparison*, which decides upon the analogies derived from these ideas, must do so without having the slightest knowledge or perception of the ideas themselves.

These, however, are not the only objections which may be urged, with force, against the phrenological doctrine of a plurality of independent, and essentially distinct organs of the mind. Let us suppose a person to be looking at a number of pillars, placed in regular order, each differing from the others in colour, shape, size and form. The united impression of these on the retina, must undergo an analysis when it arrives in the brain, and the impression of *order* carried to the organ of ORDER; that of *form*, to the organ of FORM; that of *colour*, to the organ of COLOUR; and that of *size*, to the organ of SIZE. In what manner, then, are these simple perceptions associated, so as to give individuality to the compound idea? Even admitting, for a moment, the existence of the phrenological organs, it is evident that they cannot be reconciled with the phenomena of mind, without admitting also the existence of a simple and general intellectual power, which presides over and takes cognizance of the specific acts of these organs, and gives to their operations the character of individuality.

With regard to the different faculties enumerated in this system, it does not appear to us difficult to show that some of them, at least, do not exist. The faculty of *tune*, for instance, when correctly viewed, is manifestly not to be explained on phrenological principles. It may, we think, be

laid down as an incontrovertible position, that every sensation derived from an external impression, necessarily depends for its character on the peculiar nature of the impression. As the impressions are varied, so are the sensations which are derived from them. When the string of an instrument is touched, an impression or excitement is produced in the organ of hearing; the impression is transmitted to the common sensorium, and there gives rise to the sensation of sound. If a different string be touched, the mind perceives a different sound, because a different impression is made on the auditory apparatus. Hence the character of a sound depends on the nature of the impression conveyed from the ear to the brain. But the nature of an impression must depend both on the nature of the exciting cause, and the peculiar organization of the part which receives the impression. When, therefore, a note, sounded in the presence of two individuals, is listened to with delight by the one, and indifference, or even repugnance by the other, the dissimilarity of the sensations can only depend on the dissimilarity of the impressions made on the ears of these individuals, and since the external cause is the same, the difference in the impressions must arise from the difference of the intimate organization of their respective organs of hearing. We have a right, therefore, to conclude, that a person who is incapable of perceiving harmony or melody of sounds, must be deficient in that peculiar organization of the auditory apparatus which is requisite for the reception of such impressions as are suited to give rise to the perception of harmony and melody.

Upon this subject, Bichat makes some very interesting observations. "The precision," says he, "of our sensations, appears to be so much the more perfect, as there happens to exist a more exact resemblance between the two impressions of which each is the assemblage. We see imperfectly, when one of the eyes, better constructed and stronger, is more vigorously affected, and transmits to the brain a stronger impression. It is to avoid this confusion that one eye is shut when the action of the other is artificially augmented by a convex

glass: the glass destroys the harmony of the two organs, and we use but one, that there may be no discordance." "What we have said of the eye may be applied also to the ear. If, in the two impressions which unite in giving the perception of sound, the one is received from an organ stronger and better developed than the other, the brain differently affected by each organ, will be the seat of an imperfect perception only. It is this which constitutes a false ear. Why is one man painfully affected by a dissonance which is not perceived by another? It is because in the former the two perceptions of the same sound are confounded in one; this is precise, and distinguishes the slightest fault in the song; while in the latter the two ears offer different sensations—the perception is habitually confused, and cannot estimate the defect of harmony." (Philosoph. Research. p. 16.)

The observations of Mr. Combe, in contravention to these objections, possess neither force nor ingenuity. "The auditory apparatus," he observes, "being excited to activity by an external cause, produces only the impression of sound; and here its functions terminate. If, besides, the faculty of tune is possessed by any individual, melody in sounds is perceived by that faculty. If the faculty is not possessed, such perceptions cannot exist. There is no proportion betwixt the perfection of hearing and the perfection of the power of perceiving melody. If it were part of the functions of the auditory apparatus to give the perception of melody, how does it happen, that in one individual, the apparatus can perform only one half of its functions, while in others, it performs the whole. Finally, hearing cannot produce music; because the auditory apparatus is excited only by sounds which are already produced." This language is as vague as the sentiments it conveys are unphilosophical. Sounds, we are informed, are produced before they reach the ear! This is a novel doctrine in philosophy, but nevertheless, in our opinion, a very absurd one. As well might we say that the pain of burning resides in the fire, and exists before the fire makes an impression on the body, as to affirm that sound exists before an excitement

is produced in the organs of hearing. The external *cause* of sound can bear no more resemblance to sound itself, than the instrument which wounds, bears to the sensation of pain it produces. Sound, philosophically viewed, is a *sensation*—a *perception* of an impression made on the ear by an appropriate exciting cause. It cannot exist without previous excitement and perception. Mr. C., in the above passage, seems to think, that those who oppugn the system of phrenology on the present point, are disposed to maintain the absurdity, that sound is *perceived* by the auditory apparatus." "The organ of hearing," he observes, "being excited by an external cause, produces only the *impression* of sound; and here its functions terminate!" And this he considers a good argument in support of the doctrine of a specific internal organ of *tune*. But admitting, what indeed we are fully disposed to do, that the external *cause* of sound produces only an *impression* on the auditory apparatus, are we to imagine that the *affection* of the mind produced by this impression, and which we call sound, is not determined by the peculiar character of the impression itself? The auditory apparatus has more to do than merely to receive the external impressions of the cause of sounds: it has, besides, an intimate influence on the character of sound itself.

The same observations apply with equal propriety to the organs of vision. It has already been said that the clearness and accuracy of visual perceptions depend essentially on the degree of perfection of the organs of sight, and especially on the harmony which subsists between the impressions made on the two organs of this sense. This being the case, the phrenological doctrine of *colouring* is obviously erroneous and hypothetical. The faculties of *form*, *size*, *weight*, and *order*, if they exist, manifestly depend for the degree of their power on the distinctness of the perceptions received through the organs of *sight* and *touch;* and they stand, therefore, in the same predicament with the faculties of *tune* and *colouring*. Mr. Combe observes, that the different faculties already mentioned, cannot belong to a single power of the

mind; since we find individuals who excel in the powers of *some* of these faculties, while they are deficient in those of the others. Thus, a person may be able to perceive and distinguish the nicest shades of colour, and yet be incapable of perceiving melody or harmony in sounds. A correct explanation of this fact may be found in what we have already said concerning the organs of hearing and sight; for as there can be no doubt that a person may be furnished with a delicately organized auditory apparatus, and at the same time possess less perfectly constituted organs of sight, it is manifest that the circumstance in question will occur as often as such a disparity exists in the relative perfection of these senses.

The faculty of *language* is said to be that faculty by which we acquire and use *arbitrary signs.* Thus, this faculty has the exclusive power of *perceiving*, *combining*, and *recalling* those signs or sounds, to which we attach particular notions, for the purpose of communicating these notions to others. Let us therefore suppose a person to be looking at a number of stenographic characters, to each of which a particular idea is attached. What are the mental perceptions of this person? If they be simply the *ideas* to which the characters are arbitrarily attached, why imagine a distinct faculty for their perception, when the same organ which perceives these ideas, at the presentation of their real objects, ought to be competent to recall them when suggested by an arbitrary sign.—If, on the contrary, the characters themselves constituting the arbitrary signs, be the sole objects of this supposed faculty of *language*, then we must admit that this faculty performs functions which belong to some of the other faculties; for as such characters, when divested of their associated notions, are nothing more than sensible objects, it is manifest that their perception is referrible to those faculties which, according to this system, are designed to take cognizance of such objects.

The faculty of *locality*, we are told, when powerful, "forms vivid and distinct conceptions of situations and

scenery which they have seen or heard described, and they have great power in recalling such conceptions. It gives the desire for travelling. It inspires the traveller and practical geographer, and is an ingredient in the endowment of a genius for landscape-painting. It gives the capacity of perceiving space, distance, and localities." This wonderful faculty is situated immediately above the internal angle of the eyes. Let us examine it more intimately. A tree may be considered as an individual from among the variety of objects which enter into the composition of a romantic scene. Suppose then a tree be viewed apart from those other objects with which it is associated in a natural scene; will it be said that the conception of the idea of the tree is formed in the organ of locality? We might as well assert that the idea of a horse, when we look at that animal, is formed in this imagined organ. If the individual objects, therefore, which compose a landscape, be not conceived by the faculty, can a plurality of them, however diversified in appearance, become the object of this faculty? But it will be said, that it is not a single tree, or any individual object entering into a beautiful prospect, concerning which the faculty of *locality* is employed; but that it is the total image, which arises from the contemplation of a variety of the different objects that unite to form a picturesque scene. The united impression of a group of individual objects, must, therefore, according to this opinion, be on *one* of the supposed intellectual organs, whilst that of the individuals themselves, separately considered, is made on *another;* a conclusion which does not speak much in favour of this visionary system. A tree, or a rock, or a rivulet, is to a landscape, what a *tone* is to a strain of harmony. The proper disposition of the former class of objects constitutes romantic scenery—whilst the proper mingling and succession of simple tones, produces the swell of harmonious music. But as, according to the phrenological system, it would be absurd to say, that the perception of simple *tones of melody* are formed in an organ distinct from that which gives the perception of harmony, so it would be equally absurd to af-

firm that the conception of the individual objects composing a landscape, and of the landscape itself, were formed in two distinct organs of the sensorium.

In the prenological system, the organs which are supposed to give the *propensities*, are specifically distinct from those which give the "knowing faculties." "The faculties of the *propensities* and *sentiments*," says Mr. Combe, "do not form ideas, and have not the attributes of perception, conception, memory, and imagination." The "knowing faculties," on the contrary, are said to possess these "attributes." How are we to reconcile this doctrine with the alleged powers of the organ of *locality?* This organ, we are told, takes cognizance of distance, space, and locality, and forms ideas of natural scenery. In this respect, therefore, it is a "knowing faculty." But it is also said to give *the propensity of travelling;* and in relation to its powers in this way, it is an organ of *propensity*. This doctrine assumes, too, that the desire for travelling is inspired solely by a superior capacity for perceiving, space, distance, and locality, and for forming vivid conceptions of natural scenery. It is scarcely necessary, however, to observe, that the motives which induce men to travel, are very often totally distinct from those which are derived from a fondness for natural scenery and localities. The desire to contemplate man under the diversified conditions in which he exists in different countries and states of society—to examine him as a moral and political agent—to trace the influence of climate, customs, education, and of civil and religious institutions on his character—these are among the most powerful and dignified incentives to travel.

We might go on to point out many other inconsistencies in relation to the supposed powers of the faculties enumerated in this system; but the limits which we have prescribed to ourselves for this review, do not admit of a more full exposition on this head.

The advocates of phrenology seem to place much reliance in the fact noticed by physiologists; that "the pre-eminence of man and the superior animals over others, in point of in-

tellect, is accompanied, as a general rule, by a proportionate size of that part of the head which contains the brain." As a *general rule*, this unquestionably obtains. But although it be true that the size of the brain is generally in a direct proportion to the capacity of the mind, no evidence is thereby furnished of the leading principles of the doctrines of Gall and Spursheim—of a multitude of independent and specific organs in the cerebral mass. This fact accords no better with the phrenological, than the metaphysical doctrine of the mind. We freely admit that the brain is the organ of the mind, and that the degree of mental capacity depends essentially on the degree of perfection of this organ. The charge of materialism does not, in justice, apply to this doctrine. The immaterial soul manifests itself through the medium of this organ. It is constantly influenced by the physical condition of the animal system. Its energies are repressed or excited by causes acting on the brain. If a temporary change in the condition of the brain is thus capable of producing corresponding changes in the activity of the mind, what reason is there to deny, that an original and permanent modification of the *organization* of this organ is capable of giving a corresponding modification to the intellectual faculties. This doctrine, in relation to the connexion between mind and its material organ, is, however, not peculiar to the phrenological system; nor do the fundamental principles of this system derive any support from it whatever.

It must not be supposed, however, that mere *magnitude*, or increased volume of the brain, is the cause of superior intellectual capacity. Were this the case, the size of the brain and the powers of the mind would necessarily *always* bear a direct relation to each other. In relation to the human species, this is far from being even generally found to obtain. We not unfrequently see men exceedingly stupid and insensible, and who are nevertheless furnished with prodigious heads; whilst, on the contrary, men of small heads are as often found to be possessed of a high degree of intellectual vigour. There must, therefore, be something else connected

with the organic condition of the brain, which constitutes the proximate cause of diversity in mental capacity; and as we reject the influence of mere quantity or size, we infer that the internal *organization*—the intimate and essential structure of the substance of the brain itself, constitutes the real cause of this phenomenon.

Observations drawn from comparative anatomy, have been much employed in support of phrenology. It does not appear, however, that the arguments derived from this source, are of much avail to this system. In many striking instances, indeed, they are in direct opposition to its principles. Dr. Warren states, in his recent work on the sensorial and nervous systems, that in the crania of the lion and large dogs, the external protuberances indicative of the organs of *combativeness*, are entirely wanting. He states, also, that the skulls of two *lions*, and of various large dogs in his possession, are narrower in that part where the organ of combativeness is supposed to be located, than in the skulls of various monkeys and the *sheep*. "The organ of amativeness," says Dr. Warren, "is placed in the cerebellum, its region externally corresponding with the lowest posterior part of the os occipitis. An examination of this region in animals remarkable for this propensity, does not exhibit a considerable development of the part. In the monkeys, generally, it is much less developed than in man; and in the baboon, the most extraordinary of all animals for the propensity, it is in no way remarkable." The organ of tune, also, he says, cannot be verified on the skulls of various birds. We have read what Dr. Coates, of this city, has published concerning these statements of Dr. Warren, and we intended to pay particular attention to his remarks, many of which are very ingenious, though, we think, not successful. As a proper discussion on this head, however, would extend this article beyond the limits which we have allotted to it, we are obliged to postpone our observations to some future occasion.

Phrenologists are constantly referring us to observation for proofs of the truth of their system. They allege that an

adept in their doctrine—a well disciplined skull-feeler, rarely fails in ascertaining the true character of those whose crania he explores. They are not easily discomfited. Should they find an organ fully developed without a corresponding strength in the faculty; they have several convenient subterfuges at hand:—they may refer it to general temperament—or to the predominance of some other organ. If a strong propensity is noticed in an individual, without a development of its supposed organ—why it is temperament too; or the influence of some other organ. The truth, however, is, that the coincidences upon which they rest their doctrine, are much less frequently found than they would have us to believe. It is stated in the late British journals, that the London phrenologists evinced great eagerness to examine the head of Thurtell, after his execution. Their hands were dexterously passed round, and above his ears, but the expected bump of *destructiveness* was not to be found—it is said that they were much dismayed, when, in addition to this deficiency, they found the organ of benevolence prodigiously developed. They were, however, somewhat relieved, by finding that he had prominent organs of *courage.*

As to the assertion, that the judgments formed of the dispositions and intellectual qualities of individuals from cranial configurations, are in general correct; we place no more confidence in them than we do in the testimonies which are so frequently adduced in proof of the phenomena of animal magnetism. It was at one time generally believed that the king of England had the extraordinary power of curing scrofula barely by touching the patient with his hand. Many of the most eminent medical writers of the seventeenth century, testify to this wonderful virtue in the royal touch. Wiseman, physician to Charles II., affirms, that he saw more than two hundred speedily and perfectly cured by the touch of Charles; and he vituperates those who would deny or doubt the truth of such cures. We now know, however, that the powers formerly ascribed to the royal person in this respect, have as little foundation, in truth, as the infallibility

of the Pope. Time, we apprehend, will also set men's wits to rights with regard to the speculations of phrenology.

E.

ART. VII.—*Surgical Anatomy of the Head and Neck*, illustrated by cases and engravings, by the late MR. ALLAN BURNS, of Glasgow. First American edition, with a life of the author, and additional cases and observations, by GRANVILLE SHARP PATTISON, Surgeon, Professor of Surgery in the University of Maryland, &c. Baltimore, 1823. Octavo, pp. 512.

THE first edition of this work was published in Glasgow, in the year 1811, a few months before the death of its author. Mr. Burns was, probably, one of the most distinguished teachers of anatomy and surgery who have lived in modern times. His demonstrations were so lucid and interesting, and the zeal with which he cultivated his science was so manifest, that his pupils were animated with an uncommon share of enthusiasm. We do not recollect to have heard any other teacher spoken of with so much warmth and admiration, as we have been impressed with by those who formerly attended his lectures in Scotland. It is not singular, therefore, that such a spirit of energy and originality should have been infused into his writings, as to force them upon the attention of the public. In a short time after its publication, scarcely a single copy of this work could be purchased in Great Britain; and the edition with which Professor Pattison has favoured us in this country, must now prove peculiarly acceptable to the profession.

The original text has been so long before the public, that an analytical examination of it will not be expected by our readers. We shall, therefore, devote our attention chiefly to the additions and commentaries of the American editor. We should do wrong, however, not to notice the peculiar merits of the work, as connecting relative anatomy with the history of operations and derangements of structure. In his chapter on diseases of the neck, for instance, he describes the connections of the fasciæ with the several muscles, glands and

blood-vessels; the mutual relations which occur between these organs themselves; and the diversified alterations of arrangement produced by the development of tumours. But this is not the only characteristic of the work that can prove useful to a practitioner. It contains, also, many interesting details of cases, and much enlightened pathology. To quote from recollection merely, we will describe the history which he relates of a young man, whose thymus gland having been previously enlarged by whooping-cough, was entirely discharged in form of a scrofulous abscess. Ever after, this patient was afflicted with great difficulty of inspiration, in consequence of the want of resistance to atmospheric pressure above the sternum, from destruction of the cervical fasciæ in that situation. This case was brought forward, not only to illustrate the importance of the fasciæ, but also to point out a method of remedying such an inconvenience, on future occasions, by the use of an adhesive plaster, coated over with an alcoholic solution of sealing-wax.

He also alludes to cases of enlarged conglobate glands, which were mistaken for diseases of subjacent or surrounding conglomerate ones. There can be no doubt that some of the alleged operations for extirpating the parotid and thyroid glands, must have been cases of this kind, wherein these organs were partially displaced, and their positions occupied by a morbid development of the lymphatic granules. We have seen patients with such tumours, respecting the nature of which it was very difficult to form a precise opinion; and we have witnessed one operation, in which a friend of ours removed a sub-cutaneous tumour, that counterfeited the appearance of an enlarged parotid. To guard against similar mistakes, the observation of our author should be recollected. The origin and progress of the disease should also be adverted to, at the same time that we form an exact estimate of its relative connections with surrounding parts.

He notices some cases of glandular swellings in the neck, which were mistaken for aneurisms of the great arteries in that region. Abscesses over the course of the blood-vessels,

are, also, sometimes confounded with aneurisms, in consequence of the pulsatory motions which are communicated to them. In order to distinguish between such dissimilar affections, it is only necessary to compress the tumour between the fingers, from side to side, when the peculiar thrilling sensation will not be perceived, except in cases of real aneurism. There are, however, several other circumstances connected with the history of individual patients, and the existing state of their constitutions, which may assist the discriminating practitioner in forming his diagnosis.

Mr. Burns suggested an ingenious method of extirpating tumours, when they are intimately connected with important parts. It consists in laying aside the scalpel, immediately after their surface has been exposed, and completing the operation by the fingers, or some blunt-pointed instrument. The morbid parts are thus torn away from their attachments to surrounding structures, with, comparatively, no danger of hæmorrhage.

"After the tumour has been in this way removed, it is to be carefully washed and examined, lest any of the morbid substance has been torn, and left behind. Even when we are satisfied that the tumour has been removed entire, the finger is to be run over the wound, to ascertain that no enlarged gland, or indurated cellular membrane, be left. But here it is proper to remark, that the ruptured arteries, which are felt like small hard points projecting from the wound, are not to be confounded with specks of diseased matter." In discussing the subject of sub-cutaneous tumours, he also declares, that "where the tumour is small, it is preferable, when the whole of it is uncovered, to grasp it firmly between the fingers, and suddenly, with a twisting motion, to wrench it from its place." He describes a tumour over the parotid gland, which, "when not larger than a walnut, by its pressure, produced absorption of a part of the parotid, by which it made a bed for itself in the substance of the gland. In such a case, it is evident that it would be very difficult to dissect away the tumour with the

knife, without, at the same time, injuring the parotid, which is avoided by tearing away the tumour with the fingers."

Our readers, however, should not be misled by these observations, to suppose that tumours can generally be extirpated without a free use of the knife. We have often found it to happen, that the investing cellular tissue has been condensed into such firm bands and membranes, as would defy all efforts to produce laceration. Nevertheless, we can easily conceive that the plan proposed by Mr. Burns may prove, in some cases, highly advantageous to the operator, as well as to the patient.

The ideas of the late celebrated John Bell, respecting the origin of specific tumours, are ingeniously controverted in this work. "Mr. John Bell maintains that, originally, every tumour is produced by an excess of healthy nutrition; and he would persuade us, that ultimately the parts are modified in form and character, by many changes produced by occasional inflammation and ulceration." "One would hardly have expected such an assertion from a surgeon who would make us believe that he had traced the nature and properties of these morbid productions from their simple beginnings to their final termination. Shall Mr. Bell convince any one that in cancer or scrofula the tumour was, in the first instance, formed of healthy parts; but that, eventually, the swelling obtained the peculiar character belonging to these different affections, by occasional inflammation or ulceration? I should be sorry to waste time in animadverting on this conjecture, were it not that to me it appears a point highly requisite to be well ascertained. It must be the regulator of our practice. If, primarily, every tumour be simple, then the whole art of the surgeon must consist in keeping it simple. His object must be to avoid the induction of occasional inflammation or ulceration. There is, in this hypothesis, nothing precise, and nothing really useful; but, if admitted, there is much positively hurtful, as it will lead to a timid and procrastinating practice." "As, in the present state of our knowledge, we have it not in our power to do more than form a rude notion of the nature

of swellings, we often mistake a specific for a simple tumour, and waste time in useless endeavours to promote its removal without an operation. We, in fact, allow it to acquire such a size, and to form such connexions, that when we become convinced of its intractable disposition, it is no longer optional with us to take up the knife with any reasonable prospect of success."

The good sense displayed in these observations, must be appreciated by every one who has had the misfortune to be consulted in the latter stage of specific tumours. In consequence of unwarrantable procrastination on the part of the patient, or his medical advisers, the neighbouring parts have then generally acquired a disposition to morbid action; which rarely fails eventually to reproduce the disease, however perfectly an operation may have been executed. The constitution, also, becomes so much contaminated, as frequently to develop the same disease in remote parts. Such deplorable circumstances can only be prevented by the timely performance of an operation for removing the whole morbid structure. Delay can never be attended with advantage, while the disease is, at the same time, progressing, and complicating itself with greater difficulties.

A remarkable case of emphysema is detailed on pages 81—2. A firm, tense tumour, of the size of a man's fist, had existed five years after the reception of a blow on the lower part of the neck, and behind the sterno-mastoid muscle. "During the sixth year, it received a very rapid addition to its bulk. At this time it measured six inches in diameter, seemed to be confined by a firm and dense covering, and the morbid parts had an obscure fluctuation. From first to last the tumour had been productive of very little pain. Judging, from the apparent fluctuation, that the tumour was encysted, it was resolved at a consultation to puncture the swelling, draw off its contents, and then pass a seton through it. By plunging a lancet into it, only a very small quantity of blood, partly coagulated and partly fluid, was discharged,—a quantity so trifling, that after its evacuation the size of the tumour

was not perceptibly reduced. A seton was passed through the swelling. At this time the man was in perfect health. About ten hours after the operation the patient was seized with extremely violent rigors, followed by heat, thirst, pain in the back, excessive pain in the tumour, and oppressive sickness. To remove the irritation, the seton was withdrawn, and a cathartic exhibited. The pain in the tumour, however, and the general uneasiness continued to increase; and thirty hours after making the puncture, *air began to issue from the tract of the seton;* and afterwards the cellular membrane of the neck, and of other parts of the body in succession, became distended with a gaseous fluid. In the course of a few hours more, the man died. Twelve hours after death, when the body was free from putrefaction, it was inspected. The emphysema was neither increased nor diminished since death, and some idea may be formed of its extent when the scrotum was distended to the size of the head of an adult. Even the cavities of the heart, and the canals of the blood-vessels contained a considerable quantity of air. We could discover no direct communication between the tumour and the trachea or lungs, although such was carefully sought for." In commenting upon this case, our author insinuates that the emphysema could not have resulted from the puncture of the tumour, or from the introduction of the seton. He ascribes it to an accidental rupture of some of the bronchial cells, and attempts to explain it by detailing another case, in which the disease originated from mere coughing. He supposes that, in such instances, the air is first forced into the cellular tissue which connects the bronchial vessels to each other; from whence it travels through the root of the lung, into the mediastinum, upwards to the neck, and to all parts of the body.

But, however ingenious this explanation may be, it does not appear sufficiently clear to outshine, in our minds, the manifest connection between the wounds inflicted above the clavicle and the subsequent development of emphysema. The pleura, as we have stated on a former occasion, and in another place, extends considerably above the superior limits

generally assigned to the cavity of the chest. It lines the muscles and vessels of the lower part of the neck, in such a manner as to be exposed to the effects of injuries inflicted upon that region. The lung, on each side, also, extends upwards, in close contact with the pleura, so as to form a considerable projection above the level of the first rib. The tumour, in the case just described, does not appear to have projected much externally, although it covered a large surface of the inferior region of the neck. It was flattened, and bound down firmly by the superincumbent fasciæ, so that it probably lay in contact with the superior limits of the corresponding pleura. Neither the puncture, therefore, nor the seton, need have been carried deeply below the integuments to have penetrated through the pleura, into a portion of the lung, so far as to give origin to the emphysema. This explanation is not obviated by the fact that Mr. Burns did not discover any connection between the tumour and the lung of the same side. It could hardly have been expected, indeed, that a small puncture should have been traced into the chest when it was not looked for, and when the surgeon himself was not aware of the extension of the pleura above the level of the first rib. The ideas which we have advanced are corroborated by the fact that excessive pain in the back, and high febrile irritation, exhibiting the characteristics of thoracic inflammation, soon followed the incisions into the tumour. It should be recollected, moreover, that the emphysema first appeared in the form of air rushing out through the wounds.

But we will not undertake to deny the applicability of Mr. Burns' hypothesis to the explanation of some forms of emphysema. This disease has been known to result from active exercise, as well as from coughing. Wilmer saw it occur from a tedious labour; and several cases are recorded in which it took place during the progress of constitutional diseases. In such instances, no wound or external injury could have been concerned in the production of emphysema; and it is probable that the suggestion of our author may be applicable to them. Still, however, it should not be forgotten, that this

disease may be produced by a direct secretion of air into the cells of the mucous web in various parts of the body.

At page 380, an interesting examination of the connection which obtains between the two optic nerves, is detailed. A female, forty-one years of age, was affected with fungus hematodes of the left eye, which eventually destroyed her life. The interior of the ball was found to be filled with a dark, inky substance, which probably originated from a degeneration of the pigmentum nigrum. The optic nerve was of its natural size, but of a black colour where it entered the foramen opticum. "Within the cranium it was as thick as the little finger, and as dark in colour as that part of it in the orbit. The junction of the nerves was so much enlarged, that it formed a tumour extending into the third ventricle. As from the dark colour of the diseased parts, this was a favourable opportunity for ascertaining whether the optic nerves decussate each other, or merely come in contact, I examined carefully the state of these parts. I found the dark colour extending much beyond the point where the nerves join; but this change of colour was *confined to the left side, or to the nerve of the affected eye.* On the right side the nerve was of its natural size and colour, and was merely attached to the black diseased parts by cellular threads. This dissection, therefore, clearly proved that the nerves did not, in this individual, cross each other."

This case, however, by no means decides the anatomical question with which it is connected. Meckel, in his edition of Voigtel's Pathol. Anat. Vol. I. p. 678, quotes Sœmmering, Blumenbach, Billman, Ackerman, Michælis, and Metzger, for instances of an opposite character, in which the nerve of a diseased eye became, on the other side of the decussation, diseased, smaller, and discoloured. The same author also mentions, under the head of *abnormal forms,* some cases in which the decussation of the optic nerves not only did not take place, but in which they went to the brain separate from each other. He quotes Vesalius, Fabricius, Morgagni, and Prochaska, for cases of this kind. From

such discordant facts it is impossible to draw any positive conclusion respecting the natural mode of connexion which subsists between these organs.

The short extracts we have now made from the voluminous work before us, will be sufficient to convey to our readers some idea of the nature of the whole performance. It abounds with practical observations, and is characterised throughout by good sense and sound knowledge. Although the style is not always classical, nevertheless it is explicit and instructive. We are convinced, therefore, that the book deserves a much more extensive circulation among the members of the profession in this country, than it has heretofore received.

The commentaries of the American editor are not so numerous as, from the character of those with which he has favoured us, we could have wished. He objects to the operation proposed by Mr. Burns, for removing an enlarged thymus gland, on the ground that the mesenteric glands are always diseased, and that scrofula is at the same time invariably manifested in other parts of the system. "If this opinion be correct, the operation recommended for the removal of the thymus gland, although it might relieve the dyspnœa, could, in no case, restore the patient to health; the diseased enlargement of the mesenteric glands remaining, would speedily destroy life." For our parts, however, we cannot altogether realize the force of this objection. The mesenteric disease is not always incurable, nor does scrofula, even in its most inveterate forms, prove, in every instance, irremediable. Provided, therefore, the injurious effects of an enlarged thymus upon respiration and deglutition be removed, the subsequent treatment of the constitutional disease will become effective in cases that otherwise could not have been brought to a successful termination. A much more serious objection to such an operation may be anticipated from the dangers that would immediately result, in consequence of an exposure of the cavity of the mediastinum, and of the great vessels which are contained within it.

A judicious commentary is given, under pages 54—5, on the

subject of enlargement of the lymphatic glands, in the vicinity of specific tumours. Mr. Burns gave it as his opinion, that carcinoma is never attended with a contamination of the neighbouring glands, however much enlarged they may be from sympathetic irritation, until the ulcerative stage has commenced. In scirrhus of the breast for instance, accompanied with enlargement of the axillary glands, "these tumours occasionally disappear after the removal of the mamma, which clearly shows that they were not dependent on specific contamination." The editor expresses his conviction of the opposite opinion in decided terms. "In many instances where the most accurate and minute dissection has been unable to detect, in the original tumours, either incipient ulceration or fungus, the structures of those which have arisen secondarily, have been found to present the same characters of their being of a specific nature, as those exhibited in the primary affections." The rule of practice which his experience would incline him to inculcate, therefore, would be to remove all the enlarged glands which derive their lymphatics from the diseased part, at the same time that we extirpate the primary tumour.

Under page 115, he also very properly takes exception to the judgment pronounced by the author against operating upon tumours which are intimately connected with the great arteries. "Mr. Burns' observations, as to the impropriety of attempting the removal of a tumour when we have ascertained that it is connected with the carotid artery, go a great deal too far. The connexion of an artery with the tumour, or even the vessel being surrounded by its substance, should not offer to the dexterous surgeon an insurmountable objection for (to) its extirpation, when he is satisfied that this is required for the safety of the patient."

The editor has made several other comments upon the original text, which it is unnecessary to notice in this place, although they may serve to elucidate the subjects with which they are severally connected. In an appendix, of seventy-five pages in length, he has given much additional matter upon

various points of the surgery of the head and neck, the substance of which we will attempt to communicate in a condensed shape.

The first six pages of the appendix are occupied by the detail of a very interesting case, in which severe pains in the lower part of the neck were treated, by several physicians in Glasgow, for a rheumatism. No relief, however, was experienced by any mode of treatment; and, at the end of six months, the patient died apoplectic. On dissection, it was found, by our editor, that the symptoms had been produced by an aneurismal tumour within the cavity of the chest. "There arose from above the arch of the aorta, a large tumour, which projecting externally, adhered firmly to the spinal aspect of the sternum. Upon separating this connexion, we discovered that the tumour was formed by an aneurism of the arteria innominata, and that the sternum, where pressed on, had become carious." The transverse vein was found to be compressed very firmly between the tumour and the sternum; its coats were contracted into a ligamentous cord, and its cavity was completely obliterated by coagulable lymph. The apoplexy is accounted for by these circumstances; but it is difficult to conceive how the whole progress of the disease could have been mistaken for a rheumatism.

The second note in the appendix, twenty-two pages in length, is devoted to the history of Dr. Mott's case, in which a ligature was cast around the arteria innominata, in the month of May, 1818. This operation was commenced with a view of securing the subclavian on the inside of the scalenus anticus muscle. On examination, however, it was found to be unsafe to apply the ligature in that situation; and the dissection was therefore continued towards the top of the sternum, until the greater part of the innominata was freely exposed. The ligature was applied just below the bifurcation of this artery, and the wounds carefully brought together by interrupted sutures and adhesive strips. On the twenty-sixth

day after the operation, the patient died of secondary hæmorrhage.

Respecting this case, Mr. Pattison has made the following appropriate observations: "Although this case terminated unfortunately, still its result, in so far as it concerns the operation of tying the arteria innominata, must be considered as conclusive evidence of its practicability. The operation was, in fact, so far as it was immediately concerned, successful; no alarming symptoms followed the tightening of the ligature, and the obstruction of the circulation through the channel of the vessel; the patient continued to improve in his health until the twenty-third day, when a hæmorrhage took place from an ulceration of the coats of the artery, an ulceration which has frequently occurred in instances where even the smaller arteries have been tied. If I might be permitted to offer a criticism on the performance of an operation so novel in its character, and so bold in its design, I should feel disposed to object to the previous exposure of the subclavian artery. Indeed, I am inclined to think that it was from the destruction of the vasa vasorum of so large a portion of the artery, that the fatal hæmorrhage is to be attributed; and I can hardly doubt, from the facts of the case, that had the arteria innominata been at once fairly exposed and tied, without any reference to the subclavian artery, the event would have been different. This opinion I deliver, not with the view of detracting from the credit due to the intrepid operator, but only from a desire to support and corroborate the sentiments of Mr. Burns."

It should be stated in this place, that Mr. Burns' was the first who proposed to secure the innominata by a ligature in a living subject; and that he was convinced of the practicability of this operation by repeated demonstrations of anastomosing routes, through which the circulation might afterwards be conveyed to the right arm, as well as to the right side of the neck and head.

The third note is taken up with a consideration of the difficulties which attend the operation for securing the carotid

arteries. Mr. Burns followed Sir Astley Cooper in his description of the rising and falling of the jugular vein, by which the operation was thought to be rendered exceedingly difficult. The editor comments rather severely upon this representation, which he declares to be altogether exaggerated, and calculated to create unnecessary alarm in the mind of a surgeon. He details two cases in which he performed the operation for securing the common carotid. In neither of these was there experienced any difficulty from the situation of the jugular vein. The fear of encountering it, however, produced much inconvenience in the first operation, which is very candidly explained by the editor.

In the fourth note, Dr. Physick's method of applying the wire to an enlarged tonsil is detailed. It differs from the common method, simply, in being left a much shorter time within the mouth of the patient. Formerly it was considered necessary to maintain the strangulation from two to four days, in order to effect a complete destruction of the tumour. Dr. Physick has been accustomed to use the instrument only twenty-four hours at a time; and he even proposes to devote no more than eight or ten hours to its application in each case hereafter. Although such a plan will probably succeed in all those cases of enlarged tonsils which are attached to the sides of the throat by narrow necks or pedicels, still we have our doubts whether it will not fail in cases of an opposite description. We once applied the wire very firmly around a large necked tonsil, and tightened it still more closely six hours afterwards. It was removed on the ensuing day; and although the whole substance of the gland appeared to be dead, only its exterior surface came away by the process of sloughing. The interior mass was afterwards left projecting into the throat, in the form of a raw and very irritable tumour, which required the knife for its removal. Whenever we again undertake to remove so large a tumour by the same means, we shall certainly leave the wire around it for the space of two or three days, tightening it repeatedly, at intervals of five or six hours each, until we are certain of the

complete strangulation of the whole mass. In all cases, however, where the parts are not too vascular, we would prefer the use of the knife, or scissors, for this operation. The danger of the hæmorrhage is altogether too much exaggerated by most authors. Neither the actual cautery, nor the use of styptics, will be required in ordinary cases of indolent tumours; and it is only in such that a judicious surgeon would think of operating by the knife.

The fifth note in the appendix is extended into an elaborate discussion of the methods of curing *aneurisms by anastomosis.* John Bell, the first author who clearly described this disease, considered it impossible to eradicate it except by extirpating the whole of the diseased part. Mr. Burns made what he considered a great improvement upon this idea, by ascertaining that after a portion of the tumour only has been extirpated, *the remainder may be destroyed by the steady application of pressure.* He relates a remarkable case which occurred to his brother John Burns, and himself, in which an operation was ineffectually performed for the purpose of removing an anastomosing aneurism from the temple. It was found that the tumour extended below the zygoma into the deep space behind the molar bone, from which situation it proved impossible to excise it. The hæmorrhage was very severe, and could not be suppressed by the use of ligatures. Pieces of sponge were then forced into the hollow above the zygomatic arch, and bound down by compresses and a roller. The consequences were, that not only the hæmorrhage ceased, but an entire absorption of the remaining portion of the tumour took place. The wound speedily granulated and healed, and no return of the disease was experienced.

In the time of Mr. Burns, it was considered impossible to cure this disease by any other method than those to which we have alluded. Mr. Travers, however, conceived a different opinion. In a case of anastomosing aneurism of one of the orbits, he tied the common carotid of the same side, and effected a perfect cure. This plan of curing the disease, by the indirect

operation of diverting the current of blood into other channels, was afterwards followed with success, by Mr. Dalrymple, in a similar case. Our editor has also adopted this method, in a case which he supposed to be situated in the branches of the internal maxillary artery. It occupied the walls and cavity of the antrum, and projected externally, as well as into the mouth, in the form of a monstrous tumour. It had been twice mistaken, and operated upon, for a polypus in the nose and antrum. These operations were attended with dangerous hæmorrhages, which compelled the surgeon to desist in each attempt. Before the patient applied to Professor Pattison he was nearly exhausted, by frequently repeated discharges of blood which occurred spontaneously on the slightest exertion. The carotid was taken up in this case, and a complete cure followed.

In the sixth note, the subject of fungous tumours in the antrum is considered. The common method of attempting to extirpate these tumours by the knife and actual cautery, after laying open the cavity in which they are contained, is not only exceedingly horrible and painful, but is seldom attended with success. The morbid parts can rarely be completely extirpated, and the disease is, in consequence, almost certain to return. The professor has proposed to treat such cases on, what he considers, a new principle—that of destroying their vitality by checking the circulation of blood through them. He recommends to tie the common carotid of the same side, and then to leave the parts to undergo the process of exhausting their enfeebled powers. We are well aware that the vitality, or capacity of a part for action, is proportioned to its vascularity. We know, also, that if we excite a part to the performance of an action beyond its power, that, as a necessary consequence, its vitality is destroyed; it sloughs, and is thrown off. Now, it happens that fungous tumours of the antrum generally are, like polypi of the nostrils, remarkably destitute of blood-vessels. The actions of a part, to restore its circulation, after the usual route has been suspended, are also greatly increased above those which ordinarily go on

in the same structure. Both of these circumstances conspire to render the ideas of the editor particularly applicable to the subject under consideration. Three operations have recently been performed for the cure of this disease, in the way thus recommended. The first was executed by Dr. Jameson, under an idea that previously securing the carotid, would more easily enable him to extirpate a huge tumour from the upper jaw. The professor, however, thinks that "the tumour of the gums," in this case, was nothing more than the extension of a fungus in that direction from the cavity of the antrum, the whole mass of which was subsequently destroyed, in consequence of obstructing the circulation through the parts by the ligature. The second case occurred to Professor Davidge, and is communicated at full length. The third operation of this kind was executed by Professor Hall of the same university. It is interesting to know that all three of these cases, so far as the tumours were concerned, terminated successfully.

The last note in the appendix contains the history of two operations on the lower jaw. The first of these was performed by Dr. Mott, for removing one side of the body and ascending ramus of the bone, after securing the carotid artery. The second was performed by one of the editors of this journal, for removing the body of the bone from angle to angle, on both sides, without interfering with the carotid. An operation, very similar to the first mentioned one, has been performed in Germany, by Professor Graefe, as will be seen in another part of this journal. The second case alluded to in the appendix, will be detailed at full length in the original department. We think it right, however, to state here, that Mr. Pattison was misinformed respecting the age, as well as of some other circumstances of the patient. She was six years old, instead of four, as is stated in the note.

In conclusion, we will not omit to state that the editor has promised to continue the work of Mr. Burns, in the form of a periodical volume, every autumn, until the whole surgical anatomy of the body shall have been considered and illustrated. We shall look for this original performance of Pro-

fessor Pattison, as no inconsiderable addition to our stock of professional knowledge. M.

ART. VIII.—*The Medical Recorder of Medicine* and Surgery*. Conducted by SAMUEL COLHOUN, M. D. For April, 1824.

Art. 1.—*An Abstract and Analysis of those causes, which favour and impede the progress of Medicine. By the Editor.*

WE ascertain from the title of this paper, that it is intended as an exposition of "those causes which favour and impede the progress of medicine," and we cannot but express our obligations to the author for this seasonable information; for without it, we should have been much puzzled to form a satisfactory conjecture, as to the object of this incomprehensible piece of rhetoric and ratiocination. As the whole of this production is altogether too recondite for our comprehension, we cannot pretend to give an analysis of its contents. We own that an author is not in duty bound to furnish brains to his readers, although, in the present instance, such an office would have been peculiarly useful and charitable. The initial paragraph runs thus:

"The early periods of Europe were obscured by ignorance, and harassed with the endless hosts of evils, which arise out of the unreclaimed state of the physical and moral world. The governments of that distinguished assemblage of communities, struggled long amidst these disorders, and at length *escaped beneath a brighter horizon.* Shedding their influence upon the peaceful occupations of agriculture, manufactures, and commerce, they mitigated the horrors of war, and evolved from the resources of the globe, the physical sciences, those vast engines which threaten, before many years *(shall)* have rolled away, to place within the grasp of power the most distant nations of the earth."

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* Formerly the title of this journal was "The American Medical Recorder *of Original Papers* in Medicine," &c. The present Editor has *improved* it to "The *Medical* Recorder of *Medicine*," &c.

This splendid passage requires some elucidation. It must be observed, then, that after the governments of Europe had struggled a long time amidst the evils which arise out of the unreclaimed state of the physical and moral world, "they *escaped beneath* a brighter horizon." Having escaped beneath a brighter horizon, they shed their influence upon agriculture, manufactures, and commerce; and (being still under the bright horizon) they evolved the physical sciences "from the resources of the globe." We would willingly go on to explain the remainder of this paragraph, but we have, in vain, done our utmost to extract its meaning. No doubt there is some profound idea wrapped up in it, and we entertain the hope that it may yet be discovered and brought to light, by some more fortunate investigator. For our own parts, we would rather dig for an Egyptian mummy, or set about decyphering the hieroglyphics of a Babylonic brick, than make another attempt to this purpose.

We are indebted to the author for the following curious information. "*In the cultivation of science the mind is the great instrument*, and the mode of its application is simple." We do not regard this exactly in the light of a discovery; for the ancients appear to have had some vague notions of the instrumentality of the mind, in the cultivation of science, and there are not wanting obvious indications of a similar notion among modern philosophers.

The phraseology of the following passage is not much to our taste. "Every disease has a natural course of rise, progress and decline, and the powers of the system frequently conduct the patient to health, without interference of medicine. The remedy and nature, then, are two conflicting powers, *each* of which *may both* conspire to the same end, the extinction or relief of the patient, leaving the decision of the case" *(of what case?)* "a matter of great uncertainty, more particularly from the practice so prevalent in civilized communities, where observation is most accurate, and most to be trusted, of employing the aid of medicine in every case." *Each* of

which may *both* conspire! We must leave the sentiment entangled in this maze of words, to be unravelled by the ingenious reader at his leisure; for we do not deny that there is some meaning in it, though we confess, that we have not, as yet, been able to obtain a distinct view of it.

"The *same* causes" says our author "under the *same* circumstances, will have different effects." This is impossible.—Wherever the *same* cause produces *different* effects, the circumstances under which it acts or exists *must* be different. This is self-evident, and is universally admitted as such. We have picked up at random these specimens of our author's writing and philosophy. *Ex his disce cætera.*

Art. 2.—*An Essay on Strictures of the Urethra. By H. G. Jameson, M D. of Baltimore.*

This paper occupies thirty-three pages of the Medical Recorder, and is evidently put forth with no inconsiderable pretensions to novelty and experience. The author claims for himself the credit of having discovered a new cause for retention of urine in stricture, together with a peculiar mode of operating for its relief. After having introduced a sound into the bladder of a calculous patient, he once found that the instrument was repeatedly thrown backwards and forwards by "involuntary and very painful contractions of the muscles about the urethra." "The fact which I have just noticed, was the first link in the chain of circumstances, which led to the adoption of my present views of stricture. Although the state of things here in view did not lead to stricture, still it excited in my mind the query, whether so powerful an action of muscles, acting at right angles with the course of the urethra, might not subject the urethra to a species of strangulation. This supposition was greatly strengthened by the next case which I have recorded, and has been fully confirmed, at least to my own satisfaction, by my subsequent experience." It only surprises us that Dr. Jameson could

have supposed this to be a novel opinion, which required any confirmation from his own experience. Every surgeon who has been in the habit of passing a catheter into the bladder, must have met with such temporary obstructions in the membranous portion of the urethra, as can only arise from spasmodic contraction of the surrounding muscles. The same circumstance is noticed in almost every work which has treated on the subject; and the violent succussion sometimes communicated to the instrument, is also familiar to most practitioners.

The operation, however, which Dr. Jameson has proposed, to relieve stricture of the urethra, when complicated with such spasmodic contractions of the muscles, is not of so trite a character. It consists in cutting down to the bulb of the corpus spongiosum urethræ; and, after laying open the canal at that place, and passing a director into the bladder, in cutting boldly into the *muscles on each side*, by running a bistoury on both sides, along the groove of the director. He relates fourteen cases, in several of which he operated in this manner with success. We will quote his own words for an account of the result of his experience. "I have reported ten cases in which I opened the urethra, and thereby cured the most deplorable strictures; and one case attended with a relapse, in which mortification took place, and yet the patient recovered; making, of course, eleven successful cases. Among these cases, there have been four of mortification of the scrotum, one accompanied with fistula in the perineum, two in which the urethra was opened both through the penis and the perineum. And it is further to be understood, that no unfortunate cases have been concealed, and that from the time I commenced my operations upon the urethra, I have not lost a single patient."

Against the propriety or consequences of such operations, we have nothing to urge. But we are not perfectly satisfied with the explanation which Dr. Jameson has offered respecting the kind of advantages to be derived from them. He supposes that they prove useful merely by obviating the con-

tractions of the surrounding muscles; in effect, he ranks them in the same class with operations for the relief of strangulated herniæ. "I passed a straight blunt-pointed bistoury along the groove of the director, till I was satisfied it had entered the bladder, then an incision, about a line in length, was made on the left side of the urethra; withdrawing the bistoury and reversing the director, the bistoury was again passed in, and an incision to the same extent made on the right side. By these transverse incisions I intended to *cut the sphincter muscles* which surround the upper part of the urethra, and more especially, I wished to divide some fibres of the levator ani muscle, which arising from the pubis, pass down to be connected with the rectum, and in their course embrace the urethra, so as, under certain circumstances, to produce *strangulation of that tube.*"

We apprehend, however, that it will require an incision more than one line in breadth, on each side of the cavity of the urethra, to divide the muscles to an extent sufficient to produce the effects imagined by our author. But we do not feel disposed to insist upon this point, inasmuch as we do not conceive that the favourable result of these operations depended on such an effect. Although the muscles are capable of compressing the urethra, while in a state of active contraction, they never permanently exercise the same influence. If the symptoms of stricture continue for a great length of time, they must depend on some actual disease in the parietes of the canal itself, which alone will require to be acted on by whatever treatment we may institute.

There is great reason to believe that the spasmodic irritation which accompanies many cases of stricture, is improperly treated by some practitioners. Without regarding the general state of the system, or the condition of the affected parts, they immediately resort to various kinds of catheters and bougies, by means of which the irritation is always increased, and the lining membrane of the canal more or less lacerated. Frequently, false passages are made by forcible attempts to

surmount obstructions, under such circumstances: and, finally, the practitioner either abandons the case as hopeless, or resorts to some formidable operation for the purpose of eradicating the disease. Now, according to our experience, no such difficulties need attend the management of these cases. The symptoms of irritation should always be first subdued, by general and local blood-letting, the warm bath, fomentations, opium, &c., and no attempts at dilatation should ever be made until the spasmodic contractions of the muscles have, by these measures, been allayed. We do not speak of these circumstances, however, with any particular reference to the cases reported by Dr. Jameson. His character as a practitioner is altogether too respectable to allow us to suppose that he could have neglected such necessary preliminaries in the management of his patients. Still, we desire to be so fully understood, in relation to this subject, that our readers may not be misled to suppose that the operations described by him will be frequently called for in cases of stricture. We have been much employed in this kind of practice, and in only one solitary instance have we failed to conquer the most obstinate contractions of the urethra, by a careful use of bougies and catheters, aided by appropriate remedies. In the instance alluded to, a false passage had previously been formed behind the bulb, which rendered it impossible to convey a catheter, or bougie of any kind, towards the bladder. All such cases must, of course, require operations, like those described by Dr. Jameson, to afford complete relief. We agree with him, most fully, in the conclusion, that the practice pursued by him is altogether preferable to any mode of forming an *artificial* passage into the cavity of the bladder. But we cannot conceive that it will require so extensive a division of the surrounding muscles, as he imagines, in order to produce a complete relief from the symptoms of stricture. Convey a common sized catheter but once through the whole extent of the urethra, and there can be no difficulty in maintaining it there until the perviousness of the canal be fully ensured.

Art. 3.—*An Essay on the Autumnal Fever of Brunswick, Virginia. By Thomas B. Merrett, M. D.*

The author describes the symptoms of the autumnal bilious fever, as it appeared in the circle of his practice, clearly and methodically. His treatment is neither ultra-depletory, nor ultra-excitant. He divides bilious fever into simple, inflammatory, and congestive. In the inflammatory variety he found bleeding unequivocally advantageous. "I bled" says he, "in every exacerbation of the disease, after the chill, when I was present, if the arterial action required reduction, which was indicated by a tense or chorded pulse. The good effects of the lancet, when used so as to make an impression on the pulse, were often sudden and astonishing."

He found mercury injurious, when given so as to produce a general impression, before the declension of the febrile symptoms. In cases where topical disease had taken place, a slight mercurial impression became necessary towards the close of the fever.

Art. 4.—*An Essay on the Pathological Characters and Sanability of Consumption.—Extracted from the Edin. Med. and Phys. Jour.*

This is an instructive paper. The author adverts to the discrepancy of medical testimony and opinion, in relation to the sanibility of consumption. This he thinks is owing to the want of a perfect semeiography of this disease; in consequence of which, diseases, which are not genuine phthisis, but which simulate its character, and which are more under the controul of remediate treatment, are, when cured, reported as examples of the genuine tuberculous disease. "The external signs," the author observes, "by which physicians are in the habit of recognizing the presence of consumption, may depend, 1*st.* on chronic inflammation, or other morbid conditions of the bronchial membrane; 2*d.* on ulceration, with chronic inflammation of the larynx or trachea; 3*d.* on chronic inflammation of the pleura; 4*th.* on inflammation with

suppuration of the lung; 5*th.* on tubercular destruction of this organ."

The first variety he thinks is the most common; when it arises from chronic catarrh,—consisting in a chronic inflammation of the mucous membrane of the trachea and broncheal tubes, and giving rise to a muco-purulent secretion, it is frequently remediable. As the symptoms of this affection in its advanced stages, are very much like those of genuine phthisis, and consequently liable to be mistaken for the genuine disease, he thinks it quite probable that the majority of the cases which are cured, belong to the catarrhal kind. Tuberculous consumption is not so frequent as would appear to be thought by some. Dr. Willan, in his Reports for April, 1797, says, "I apprehend not more than a *fourth* part of the whole number of cases put down, could be referred to proper phthisis, arising from the *slow and successive suppurations of tubercles*, in strumous constitutions." So long as the inflammation of catarrhal phthisis is confined to the membrane lining the bronchial tubes, it is sanible, but when the inflammation extends to the sub-mucous pulmonic tissue, producing a hardening of the cellular membrane, the disease assumes a fixed character, and resists the usual remedies.

Symptoms of phthisis, depending on ulcerations in the trachea and larynx, are not uncommon. The termination of these cases is *generally* unfavourable; yet cases of this variety are sometimes cured. "In a case related by Heller, in Thomann's Annals, recovery took place, under the use of sulphuret of antimony and hyoscyamus, with a restrained diet, composed chiefly of Iceland moss, and afterwards with inunction over the throat, of an ointment containing calomel and opium." Symptoms of phthisis may arise from inflammation of the pleura, extending to the lungs, producing infiltration, hardening and ulceration of its substance. Chronic inflammation of the pleura is generally attended with the secretion of a sero-purulent fluid, which often accumulates to such an extent as to compress the lungs of the affected side

into a small and compact mass. This is what Broussais calls an *atrophied lung*.

The formation of distinct abscesses of the lungs, according to Laennec, is exceedingly rare. This writer says, "that small abscesses (unconnected with tuberculous softenings) are found in the pulmonic tissue not above four or five times, and an extensive one not above once, in many hundred cases." The author thinks it probable, that cases of this kind are in some instances remediable. With regard to scrofulous, or genuine phthisis, the author thinks that cases of recovery must be exceedingly rare. This essay contains many interesting observations, and deserves to be read with attention.

Art. 5.—***Operation performed and recommended for the cure of imperforate anus; two cases detailed, illustrative of the method and success of it. By John Rhea Barton, M. D. Surgeon of the Pennsylvania Hospital and of the Philadelphia Alms-House Infirmary.***

In the cases reported by Dr. B. "there was not the slightest trace of an anus in *situ naturali;*" but the rectum terminated in the vagina.

Case 1.—The subject of this case was six weeks old. Not the least trace of an anus was seen, the fæces were discharged per vaginam. A fistulous passage existed between the vagina and the rectum. The usual operation for imperforate anus was performed. An opening was made into the rectum, through which the fæces escaped freely. Patent lint dipped in sweet oil was then introduced into the opening. Granulation and cicatrization soon commenced. It was prevented from closing, by introducing a bougie and bringing it out of the vagina by the originai passage. This produced much irritation. The child was taken from town and the artificial opening closed up, rendering the operation ineffectual. Nine months afterwards Dr. B. performed the following operation on this patient. He laid open the vagina and integuments as far back as the place where the anus should be; at this place he removed a small portion of the integuments, and dissected down

until he arrived at the termination of the rectum, which he opened freely. By this operation the anterior boundery of the incision was formed by the fistulous opening into the vagina, and posteriorly it terminated at the place where the anus should be. The subsequent treatment consisted in endeavouring to promote granulations and cicatrize the original opening. The operation was successful.

Case 2.—This case was similar to the one just mentioned. Dr. Parish operated in the following way: "A probe, having a curvature suited to the purpose, was introduced into the vagina, thence through the orifice of the communication into the rectum, so as to protude the integuments in the place where the anus should have been. An incision was then made upon the point of the probe, with a small scalpel through the integuments, and the opening thus formed was freely enlarged, both anteriorly and posteriorly, until it was supposed that the intestine was opened." It was found, however, that the rectum was in fact not opened; and the operation did not succeed. Dr. P. afterwards operated according to the mode adopted by Dr. Barton, and he succeeded perfectly. These are interesting and instructive cases. The success which attended Dr. B.'s mode of operating is a sufficient proof of its importance. We well recollect the difficulties which we once encountered after performing an operation for imperforate anus in the common way. It proved impossible to evacuate the fæces, except by the daily introduction of a director, until, finally, the child died of convulsions from malformation of the heart. We shall, certainly, therefore, adopt the method recommended by Barton at every future opportunity.

Art. 6.—*Case of adhesion of the sides of the uterus. By Joseph Wheelwright, M. D. of Westmoreland County, Virginia.*

Forty-eight hours after labour commenced, it was found, on examination, that "a hard tumour, of an uniform surface, from one and a half to two inches in diameter, occupied the place of the os tincæ. Its adhesions to the whole circumference of

the vagina were distinctly traced. No vestige of the os tincæ remained." The pains were for some time suspended by opiates; and, in the meantime, it was determined to form an artificial opening for the passage of the child. A crucial incision was accordingly made through the tumour, " which was hard and nearly an inch in thickness." The hæmorrhage was trifling. The child's head was felt presenting." The labour advanced rapidly, but as laceration at the extremities of the incision had commenced, and as there was no prospect of the parts dilating, it was thought necessary to lessen the child's head." This was done and delivery was soon effected. The woman recovered in the ordinary time.

Art. 8.—*Case of Empyema successfully treated. By Dr. Craven of Harrisonburgh, Virginia.*

There is nothing novel presented in this case.

Art. 9.—*Review of a Practical Essay on Typhus Fever. By N. Smith M. D. &c. &c.*

This work is reviewed in the present number of our Journal.

The remainder of this number is occupied by reviews of the New-York Medical Repository, Vol. viii. No. 1—2.—The New-England Journal of Medicine and Surgery for January, 1824.—The New-York Medical and Physical Journal for March, 1824, and the Philadelphia Journal of Medical and Physical Sciences.

Art. IX.—*Jahres-Bericht ueber des clinische chirurgisch-augenærztliche Institut der Universitæt zu Berlin,* (*fur* 1821) abgestattet von Director der genanten Anstalt; Geheim. Rath. Graefe.

Annual Report of the Clinico-chirurgic Eye Institute of Berlin. By Professor Graefe.

During the year 1821, nine hundred and ninety-six individuals were treated in this institution. Of these six hundred and seventy-five were affected with surgical diseases, and three

hundred and twenty-one with diseases of the eye. Two hundred and eighty-eight operations were performed. Of the whole number of patients, only eighteen died.

We notice the following cases, as among the most remarkable mentioned in this report:

1. A young man was admitted into the institute, with a very singular disease of one of his eyes. A number of hairs grew out of the globe of the eye, near the junction of the sclerotica with the cornea. The small lipomatous (lipomatœse) surface out of which they grew, was removed with the knife, by which the patient was effectually relieved.

2. A patient, whose eyes were nearly destroyed in consequence of the irritation produced by a double row of eye-lashes, was cured by cutting off the edges of the eye-lids with a pair of curved scissors, so as to remove entirely the offending eye-lashes.

3. In a case of inguinal hernia, the protruded intestine was so much distended, that even large incisions into the ring did not enable the surgeon to return the bowel. As it was perceived that the contents of the protruded intestine were of a liquid consistence, the operator resolved to puncture the tumour with a trochar, and to evacuate its contents in this way. This was done; the bowel immediately collapsed, and, having previously passed a thread through the mesentery, it was returned without the least difficulty. On the ninth day, the thread was removed, and the patient was perfectly restored at the end of the fifth week.

4. Two operations were successfully performed, for the removal of portions of the lower jaw-bone. *Case* 1*st*.—A woman, aged forty-four, had suffered for a considerable time, with an osteo-carcomatous affection of the lower jaw. The whole anterior portion of the bone was very much enlarged by the disease. The soft parts over the diseased bone, were covered with cancerous fungosities, divided by deep fissures, discharging an ichorous fluid. The operation was performed in the following manner: An incision was made through the middle of the lower lip, downwards, and continued to within

a very short distance from the throat. The soft parts were then dissected off from the external surface of the diseased bone; next the boney tumour was separated from its adhesions on the internal surface, and a leather strap drawn through, under it. The maxillary was now divided with a saw on each side of the tumour, and the diseased portion, together with the teeth, removed. The hæmorrhage was stopped; the lips of the incision brought together, and held in union by means of twisted sutures. The wound was entirely healed by the end of the fifth week after the operation. The chin was, at first, flaccid and wrinkled; by degrees, however, it acquired a cartilaginous firmness. The patient's health was entirely restored. *Case 2d.*—In this case, more than one half of the lower maxillary was diseased; the disease extended, on the left side, as far as the condyloid process. The osteo-carcomatous tumour protruded downwards, towards the throat; it was also much enlarged posteriorly, and firmly pressed against the important vessels and nerves of the neck. The internal cancerous fungoid tumours had pushed the tongue into the right cheek, and had filled up the cavity of the mouth so much, that the patient could only, with the greatest difficulty, take small quantities of liquids; articulation was almost entirely destroyed, and respiration was performed with the utmost labour. In this situation, the patient urgently requested that the diseased parts should be removed by an operation. The circumstance of the intimate connection of the enormous tumour with the important surrounding structures; of its insinuation between the large blood-vessels and nerves of the neck, and of the hæmorrhages which immediately ensued on disturbing the fungoid excrescences, rendered the danger of this undertaking, of which surgery, as yet, afforded no example, at once evident and appalling. As it was, however, certain that the patient could live but a short time, un less relieved by an operation, the surgeon thought it his duty to comply with the earnest desires of this heroic girl. The operation was performed in the following manner: The first step

was to take up the carotid artery, to obviate dangerous hæmorrhage. When this was effected, an incision was made through the cheek from the corner of the mouth to the posterior edge of the inferior maxillary; a second incision was then made, circumscribing the diseased portion of the skin, from the beginning of the first incision to its termination. A third division was now made from the beginning of the two first incisions, in the direction of the articular process of the maxillary, and carried over the joint to within a short distance of the ear. Having made these divisions, the external surface of the diseased bone was separated from the soft parts; it was next, also, detached at the chin, from its internal connections, and immediately divided, at that part, with a saw. The bone was then dissected from its attachments posteriorly, separated from its articular cavity, and removed. After uniting the wound, at the angle of the mouth, by proper sutures, the parts were covered with simple dressings. The patient was quite well during the first seven days after the operation. On the night of the eighth day she was suddenly seized with apoplexy. The effects of this gradually changed to a state of fatuity, attended with hemiplegia, and an inability to speak. The paralysis of the right foot gradually subsided. The healing of the wound, notwithstanding, went on regularly, and cicatrized perfectly. The paralysis of the right arm and tongue also disappeared by degrees. The patient began to recover strength, and enjoyed, when this report was drawn up, a good state of health. E.

ORIGINAL DEPARTMENT.

(We have been favoured with the following communication from our friend, Professor Hoecker, of Berlin, whose character as an erudite writer is fully established in Europe. The work on the History of Medicine, which he is now publishing in annual volumes, ranks among the classical productions of the medical literature of Germany. The doctrines which he here advocates, are taught in his lectures, at the celebrated university to which he is attached. They will be interesting to our readers, inasmuch as they may be considered the standard of medical orthodoxy in one of the first schools on the continent of Europe. The manuscript is sent to the press exactly as it came to our hands from the learned author himself, without any alteration either in style or orthography. It will serve to show not only the thorough knowledge which the German professors have of our language, but also the probability that all our productions may pass under their immediate observation.)

ART. X.—*Observations on the Operation of Medicinal Substances.* BY F. FR. CH. HOECKER, M. D., Professor of Medicine in the University of Berlin.

(Communicated for the Medical Review.)

THE action of remedies has, in all ages, been generally explained by resorting to arbitrary suppositions; and hence each particular school has modelled this doctrine conformably to its own peculiar tenets. It was reserved for the sagacity of modern times to adopt the only certain method which can lead us to a knowledge of the laws of organic life, as connected with this subject; an inconsiderate adherence to all the parts of a pre-embraced system never conducting to useful results. And, we may ask, what benefits were ever likely to be derived from the views of the humoral, chemical, or even mechanical pathologist? views depending on false notions of life, and which, like shadows, disappeared as soon as the light to which they owed their illusive reality, was made to shine on an opposite side of the subject. Even the fundamental ideas to be found in more modern systems, based on dynamic principles, have proved so little satisfactory, that many totally despair of our ever being able to arrive at certainty on this head. And thus, errors, tending in no small degree to impede our further advancement in the knowledge

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of therapeutics, both in its specific and general doctrines, have been suffered to remain unrefuted; nay, not seldom, have been generally received as incontestible verities, to the great prejudice of future inquiry. In our present lamentable state of ignorance on this subject, isolated explanations and rectifications is all that can be expected: but where fragments alone are possible, there all possible fragments make up the whole.

The theory of absorption, as established by modern experiments,* offers to us a certain fixed point, whence we may commence our researches. It was generally believed, that the absorption and action of substances introduced into the body, was exclusively confined to the lymphatic system. Even previous to the times of Mascagni and Cruikshank, the old doctrine of venous absorption had been pretty generally rejected, and afterwards appeared to be universally given up. Little did physicians imagine, what a sensible restriction they thus imposed on medicine, but they soon found themselves involved in difficulties respecting the explanation of several important occurrences in the animal frame, such, for example, as the rapidity with which many substances pass off by the kidneys, the actual translation of matter in metastases, and even the operation of medicines themselves, having quitted a plain and beaten path, for one more remote and obscure, the thorny narrowness of which they never once seem to have remarked. At length it was found necessary to restore to the veins their ancient office, and hence alone are we capable of taking a sufficiently comprehensive view of the above-mentioned processes, corresponding to the various functions discharged by the veins. We may assume, then, as an established fact, that there are two ways by which

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* On this subject compare: F. Tiedemann and L. Gmelin versuche úber die wege auf welchen substanzen aus dem Magen und Darmcanal ins Blut gelangen, uben die verrichlung der Milz und die geheimen Harnwege. Heidelberg, 1820, 8vo. and an essay by Seiler and Ficinus, inserted in the Zeifschrift fur Natur und Heilkurde, where will also be found a full enumeration of those who have treated upon this subject.

substances enter the system; the one by lymphatic, the other by venous absorption. But these differ materially from each other; a circumstance determinable a priori, from a knowledge of the fact, that from a difference of structure results a difference of function. The most important one for our present purpose, is the following, viz., that the veins are destined to take up the more heterogeneous substances, the lymphatics, such as are more immediately proper for nutrition. Medicinal substances, in general, belong to the former class; consequently, their effects must obviously depend on the laws of venous absorption, whence alone they are to be explained.

1.—Conformably to the above statement, we very naturally first inquire into their action on the blood,—that fluid organ, itself possessed of a high degree of vitality, and transporting to every part fresh organic matter, in which the vitality of the organism takes root, not as the plant in the dead earth, but as the fruit in its maternal womb.

The effects produced on this fluid by medicines, are no doubt as various as the substances themselves; but the want of a sufficient number of accurate and diversified experiments, presents here serious obstacles to the success of our investigations. A mere change in the intensity of the vital actions of the blood, will not carry us far in our explanations, and appears only in a few instances to throw light on the operation of medicines. It is, however, this variously modified activity of the blood, inexplicable on the mere supposition of increased or diminished action, which it is here necessary to understand, but of which we are unfortunately the most ignorant. If what is termed the putrid, scorbutic, and dissolved state of the blood, be admitted as a proof of diminished vitality; and, on the other hand, an increased tendency to coagulation, a greater adaptation for nutrition, be regarded as a mark of a higher degree of vital energy, then the modus-operandi of such substances as produce these states, will, for the most part, at once be evident. Resolvents, especially those of an alcaline nature, act by being directly received into the blood, diminishing its vitality, and impart-

ing a tendency to dissolution. Tonic antiseptics, on the other hand, have a diametrically opposite action. Here, however, it is of consequence not to lose sight of that vital property of the blood, by which it withstands the action of foreign bodies, and by which no doubt the virtue of remedies is often completely overpowered, so that it then merely serves as a vehicle of transportation, thus conducting them, itself undecomposed, to other parts of the system, upon the specific character of whose vitality they are calculated to act. If the substance be of a nature altogether heterogeneous to that of the animal frame, as is the case with the metals, we then find, leaving out of consideration its action on other parts, that the vital energy of the blood is sometimes raised to the highest pitch; agreeable to the general law, the stronger the action exerted by any substance, the greater the effort of resistance. But should this increase of action eventually prove insufficient to prevent the action of the foreign body, then the blood passes into an opposite state, just as a high degree of excitement of the frame, in general, is followed by one of corresponding depression. Mercury given to a certain extent, brings on a true inflammatory state of the blood; for when drawn in the height of salivation, it has often been found to present the buffy coat; if its use, however, be pushed still further, a dissolved and scorbutic condition of that fluid is the consequence, as daily experience witnesses.

Of much importance is it, in the next place, to consider the actions of the liver, which evidently exerts so powerful an influence on the blood, that we cannot but look upon it as the most important organ of assimilation, next to the lungs. It affords another method of effecting the decarbonization of the blood, to express the real nature of its function according to present chemical views; and though the process is different, it is not less extensive. Substances, therefore, which have passed through this organ, are consigned, materially changed, to the inferior vena cava, whence their subsequent effects can only have a more or less distant correspondence with their original character. The assimilation of medicinal

substances, indeed, commences with their absorption, and their action on remote parts depends on the degree to which that process has been carried, according to which they retain more or less of their specific nature; and consequently, also, on the nature of the elements into which they may have been decomposed, as being either of a mild and completely organic character, or still capable of acting as heterogeneous substances. Sublimate is no longer sublimate after having passed the stomach, yet the effects of its elements,—effects of the sublimate after suffering organic influence—are easily perceived on the most distant parts of the system. Of course, the liver is not a mere conduit through which these substances pass, but is itself modified by them, and these modified actions naturally evince themselves more directly in the biliary secretion. This puts into our hands a means of re-acting on the alimentary canal, although it mostly happens that the effects we are speaking of, are somewhat obscure, and thence less open to the eye of observation. We must remember that the liver is a venous organ, in consequence of which its actions are tardy. The prevailing character of its diseases afford a sufficient proof of this. Its irritability, moreover, not being great, and the effects of substances being more evident in organs possessed of a higher degree of this property, and which carry on their functions with greater activity, it is easy to conceive why so few of them, comparatively speaking, seem to possess any particular action upon it. Further hepatic disorders from the nature of the organ being with difficulty removed, the want of confidence which physicians have generally placed in aid sought from this quarter, seemed confirmed by experience.—It must, however, be confessed, that the excessive doubts and scruples of many on this point, have little contributed to the advancement of medical science. Conformably, then, to the preceding observations, it must be granted, that medicines, used internally, possess certain direct actions on the liver.

2.—The most important of all organs, however, with which medicinal substances are brought into actual contact,

is the heart, the influence of which is also, at the same time, no doubt the most extensive. The blood, its natural, almost exclusive, and never-failing stimulus, surpasses all sympathetic ones, although in point of intensity the latter may hold the next rank. The extremely powerful action of foreign substances on this fluid, is most strikingly exemplified by injection, a rude and dangerous manner of operating on the animal organism, which can never afford us sufficiently general results, but must ever continue restricted to a few individual cases.

Substances thus introduced into the blood, do not undergo the usual and gradually assimilating processes, but without suffering any change of property, are at once brought into contact with the heart, just as we received them out of the hand of nature, or as they were presented us by the crucible or retort. Less perturbating, indeed, is the operation of strong remedies, after being more or less decomposed and assimilated; but still sufficiently considerable, from the great irritability of the heart, to furnish us with a most powerful means of producing salutary changes in the animal economy, when conducted with judgment, and a knowledge of the reciprocity of functional actions.

It is well established, that any change in the heart's action is propagated to the extremity of the arterial system. In fact, the specific character of its vitality depends nearly entirely on the state of the heart. The motion of the blood in the arteries corresponds to the manner in which the motions of the heart are regulated, whether strong or weak, frequent or rare, quick or slow, and can indeed be but little affected by the arteries themselves. As the heart would seem possessed of the highest possible degree of irritability, so the arteries have only the much inferior property of contractility; the former acts immediately on the application of stimuli, the latter slowly and gradually. It is of consequence here to distinguish between the mere mechanical or hydraulic, and the dynamic influence of the heart upon the arteries. The former manifests itself in the manner in which the blood is

propelled through the arteries, and the effect of the stronger or weaker columns of blood upon the latter; whence results the influence of the varied force of circulation on the functions of individual organs. The latter, or dynamic, on the other hand, displays itself in the influence of the heart's irritability on the contractility of the arteries. Both disease and the effects of remedies, which indeed generally throw a mutual light on each other's actions, present us with numerous instances of these two species of influence.

Spirituous substances, which remain in the blood for a considerable length of time, without suffering decomposition, act as violent stimuli of the heart, increasing the frequency, quickness and strength of its contractions; whence the circulation in general becomes accelerated, and the vital actions of the whole frame raised to a higher pitch. This is clearly evinced by augmentation of the animal heat, by the activity with which the various functions are performed, as well as by a feeling of greater animation, experienced by the individual himself. Regarded in this light, the action of such substances on the nervous system, is merely secondary; although we cannot deny, that in part, and only in part, as we shall see presently, it is primary; whereas, formerly their action has in general been exclusively limited to the nervous system.

In the present, as well as other instances, the two sides of the heart are manifestly not equally affected; since previous to the arrival of substances in the left side, they must necessarily be subjected along with the blood to the assimilating processes carried on in the lungs, where they no doubt undergo important changes, and become diminished in activity. Hence it follows, that the left side will be much less exposed to their action than the right. This, however, can be of little moment where action is merely exalted or depressed; for the contractions of the heart in all their extent, are regular and synchronic, so that a stimulus acting on any particular part, exerts its influence over the whole, just as well as if it had been brought into actual contact with its entire surface.—

Directly opposed to the action of the volatile stimulants, is that of the digitalis purpurea. This latter produces an absolute diminution of the heart's actions; whence it moderates the force of circulation and the functions depending thereon. In some respects, the mineral acids bear a resemblance to this substance; both diminish the frequency of the pulse, but in a very different manner. The acids, not by lowering the irritability of the heart, but by increasing the intensity of its contractions, so that their repetition within a given period becomes less than when excited by a more inconsiderable or moderate force. In short, in proportion as their vigour is augmented, they become more regular and exact. But this addition of energy to the heart is not confined to that organ alone; its influence is extended over the contractility of the arteries throughout the system; the pulse becomes harder, the vessels contract themselves more than usual, and in consequence thereof, hæmorrhage sometimes occurs from their extremities. Between this influence of the heart on the arterial system, easily observed also in other circumstances, besides those of increased power of contractility, and the phenomena of sympathies, generally attributed to the nerves, we may have a very evident analogy. To ascribe the above effects to the presence of the acid in the arterial blood, is a supposition scarcely admissible, even though we should grant what may be termed a higher state of oxidation of that fluid, and therefore one more calculated to act on the contractile power of the vessels. In our opinion, it is much more natural to explain it on the principle, that similar vital phenomena in an organism, whether produced in conjoining or distant parts, remain still in connexion, and reciprocally act on each other. The existence of this consent between the irritability of the heart and the contractility of the vessels, cannot, we presume, be called in question. They are properties differing only in degree, not in nature; and the very marked distinction made between them by Haller, and still more, his terming contractility a vis mortua, have but little contributed to aid

the labours of his followers. From the latter errors, however, physiologists appear to have timely freed themselves.

Hitherto the effects which we have mentioned as resulting from substances brought into contact with the heart, are of a general kind; that is to say, extending regularly over the whole frame, no part being more particularly affected than another, except, perhaps, where, from a higher degree of vascularity, a larger surface of action is presented. There are, however, many remedies which seem to operate in a more especial manner on particular parts; and which, notwithstanding they are carried along with the circulating blood to the heart, have little or no effect upon it; but suffering more or less change as they pass along, arrive at certain organs, upon whose irritability they appear to be calculated to act. Such effects are termed specific; although it is usual to denominate remedies specific which are useful against certain diseases, without any reference to the seat of such diseases.

Of all specifics, mercury incontestibly claims the first rank, as a stimulus of the salivary glands. There is none, however, respecting the operation of which physicians have been more greatly mistaken, owing to the erroneous notions prevailing on this subject. Agreeable to the doctrine previously laid down in the commencement of this paper, and which is established by most unexceptionable experiments, and therefore needs no further elucidation in this place, namely, that heterogeneous substances are taken up by the veins, there can be no doubt that mercury acts through the medium of the blood. The absorbents, so termed by way of distinction, do not take it up, or at least in so small a quantity, as to be totally unworthy of consideration. We have already hinted, in passing, at its action on the blood; that it further acts on the irritability of the heart, is clearly evinced by the well known fever to which it gives rise. Its effects, moreover, on the extremities of the arteries, or what is termed the capillary system, and thence on the organizing process altogether, are very remarkable. It both accelerates and alters secretion, either in the same or a similar manner to that by which nature endea-

vours to rid herself of foreign matters: and we imagine, that it is thus alone that she removes general affections of the system, from whatever kind of virus they may originate, and, above all, by increased perspiration. At the same time, absorption goes on with increased activity at the venous extremities, to which, perhaps, together with altered secretion, the resolvent effects of mercury are to be attributed. Its antisyphilitic virtues would appear to be solely ascribable to its rendering the system capable of throwing off the absorbed virus, by the complete change effected in its reproductive actions, of which increased secretion is a consequence. For we know, that by keeping up a proper degree of perspiration for a sufficient length of time, the same end may be accomplished, even without mercury. This, however, is no disparagement of the virtues of that remedy, which manifest themselves, even under unfavourable circumstances.

If, then, this statement be consonant with truth, it is at once conspicuous, how ill-founded and little worth the generally received opinion is, that the operation of mercury is confined to the lymphatic system. In proof of this, it is usual to adduce salivation; although the salivary glands have but little connection with the lymphatic system, and as far as secretion is concerned, none at all.

There are still other specific effects of remedies, using the term specific as previously defined, and particularly with respect to the excretory organs. The kidneys are generally employed by nature as an outlet of heterogeneous substances, and hence the reason why they are more frequently called into action than other organs. Is this action of such a nature as to accelerate secretion, then they act as diuretics. Other examples of modified action, not merely attributable to change of intensity, are sufficiently well known. All the phenomena observed with respect to these organs, admit of an easy and simple explanation by venous absorption, and it is at the same time very visible, how little physiology has been benefitted by the various fanciful and unhappy conjectures formed on this subject, however much acumen may occasionally have been displayed.

3.—We come next to the consideration of the effects produced on the alimentary canal. The result of a series of experiments, instituted on this point, shows, that totally heterogeneous substances are but sparingly absorbed by the veins of these parts, and that by far the greatest part immediately passes off by the first passages as foreign matters. It is otherwise, however, with substances capable of being fully assimilated; such are completely absorbed. Besides straightening the passages, as it were, by which substances enter into the system, nature has also further wisely ordered, that by acting as stimulants, they promote intestinal secretion, accelerate the vermicular motion, and thus hasten their own rejection out of the body. In this manner, substances of a totally opposite nature act directly on the irritable parts of the intestinal canal, without previous absorption. The effects produced, however, are not always similar, sometimes very essentially different. Some appear to act more particularly on the reproductive process; others rather on the irritability of the canal, or, in other terms, by accelerating secretion, and the peristalic motion. And we cannot but esteem it as one of the most gross errors, originating in too great a desire for simplification, to deny the existence of such differences among the various purgative remedies. They are usually treated of more fully than other substances, by authors on general therapeutics; it would seem, however, that the idea of derivation is all that is here required to be more particularly kept in view; or, to express ourselves otherwise, the laws of consent and antagonism, especially with respect to the operation of the antiphlogistic salts. To say that a remedy has a cooling or antiphlogistic operation, gives us no clear idea of the subject; it merely informs us of a fact, to obtain which we must employ a certain means. All anti-inflammatory salts excite the actions of the intestinal canal, even when purging does not follow. To suppose that they acted as debilitants of the intestinal canal, was certainly highly erroneous, for it is precisely here that they act as stimulants, and debility is a consequence either of their abuse or protracted administration,

just as any other over-excitement is followed by a similar result. To this very excitement are due their good efforts; and which, in inflammation of distant parts, operates solely by derivation from the extensive sympathies of the alimentary canal with the system in general. If it is true, that the great art of physic consists in discovering and subsequently following the laws of consent and antagonism, or, in other expressions, the organic relations of parts, then the above doctrine furnishes a most striking proof of this truth. It may be objectingly asked, why do other evacuants not only not prove equally beneficial, but even prejudicial? The answer is contained in the explanation already given. Many bring on other effects totally inconsistent with inflammation; they heat, constringe, or the local excitement of the intestinal canal is communicated to other regions, and thus they neutralize their own salutary influence. Further, the effect of that portion of them, which is received into the blood on this fluid itself, as well as upon the heart, and thence indirectly on the vessels, must also here necessarily be taken into consideration. All neutral salts bring on a tendency to a dissolved state in the blood, prevent it therefore from taking on a highly organizing character, in which state it acts much more powerfully on the heart, and thus abstracts in part that morbid stimulus which gives rise to so great perturbation of its functions. Mercury appears to counteract inflammation in a similar manner.

4.—The action of substances on the nerves, so variously treated of by authors who have adopted dynamic principles, is capable, we apprehend, of a plain and simple explanation. After being received into the blood, they are brought along with that fluid into contact with the nerves of the whole system, so that, when the latter are susceptible of their action, the effects will be general, or of a more partial kind, from the greater distribution of nerves to some particular part. Besides this, they possess a direct and immediate action on the nerves on being taken into the stomach, previous to any absorption whatever. The impression thus received they propagate in the same manner as they do other local irritations.

To enumerate all these laws of propagation, would here be of no use; we shall, therefore, content ourselves with mentioning one which is of the highest moment, viz. that nervous irritation, of whatever kind, or wherever excited, continues to be propagated, till, by a multiplication of fibrous structure of the nerves, an obstacle to its further progress is presented, after which it necessarily becomes diversified or intercepted. Whence, it naturally follows, that the central mass is most liable to be affected, and next to this organ the cuticular surface, and in short all parts, between which and the stomach there exists a nervous consent, and which from their structure present obstacles to the propagation of the impression, especially the ganglia, and thus, by retarding it, expose themselves in a greater degree to its action. The parts contained in the chest and abdomen, are particularly of this character. All these influences are purely of a dynamic nature, there being no conveyance of any subtle matters, an idea from which, till very lately, physicians have not been able to free themselves.

Such appear to me, in the present state of our knowledge, the chief points of view, under which we are to consider the operation of remedies in general. It is scarcely necessary to mention, we presume, that the effects previously described, never exist singly, but, to a greater or less degree, conjointly. It were easy to adduce further proofs and examples, in support of our assertions, had it been consistent with the object of a mere precursory essay. Besides, when general principles are once properly laid down and well established, their application to particular cases presents little difficulty.

ART. XI.—*A case of Osteo-sarcoma of the Lower Jaw, in which the body of that bone was amputated.* BY GEO. M'CLELLAN, M. D.

SOMETIME in the spring of the year 1821, Mary Rice, a daughter of Mr. Martin Rice of this city, fell upon the pavement with considerable violence. She was taken up in a state of insensibility; her chin was severely contused, and the front

incisors of her lower jaw were found to be loosened. For a long time after this accident, she complained of severe pains, shooting along the throat from her chin to both ears. The teeth, which were loosened, soon became discoloured, and less firmly attached to the gums.

In about three months afterwards, her parents first observed a small, hard, fleshy-looking tumour underneath the apex of the tongue. The front part of the jaw, about the same time, also began to enlarge, and gradually extend itself downwards and forwards. At this period the pains became very acute, and they subsequently continued with the development of the disease.

Although the tumefaction of the bone continued regularly to increase, it did not acquire a very alarming aspect, or produce much mechanical inconvenience, until sometime in the early part of the year 1823. Notwithstanding the little sufferer experienced much pain and loss of sleep, she preserved a good appetite, with the power of masticating any kind of food. After the period last alluded to, however, the parts became so enlarged as to produce a frightful appearance, and prevent the introduction of solid aliments into the mouth. The bone not only swelled downwards into the throat, but the tumour, which had originally been discovered underneath the tongue, extended itself upwards into the mouth, and by rising above the level of the teeth, wholly prevented mastication. From this deplorable condition, the disease continued to increase, with alarming rapidity, until the tenth of July, 1823, when I was called in to examine the patient.

She was then exactly six years old. Her strength was greatly exhausted, her countenance indescribably haggard and distressed, and her body emaciated to the extreme. The whole substance of the bone, in front of its angles, appeared to be enormously enlarged, projecting downwards before the neck, and backwards into the throat. The under lip was greatly extended, and attenuated by the pressure of the enlarged bone, which directed itself somewhat towards the left side of the throat. The skin appeared very vascular, with

tortuous and enlarged veins; and numerous small arteries could be felt pulsating under its surface. Her mouth was pushed open, as much as possible, by a huge tumour, which extended upwards from the inner surface of the inferior maxilla, and protruded outwards, so as to present precisely the appearance of an enlarged tongue. (See it as represented in fig. 1 & 3.) This tumour rose above the molar teeth, so as to be applied firmly against the roof of the mouth; and it entirely overlapped the incisors as it extended anteriorly, enveloping them in its substance. There was a small longitudinal fissure in its superior surface, through which the two blackened and detached incisors had been picked out with a probe. It was impossible to discover the posterior limits of this tumour, although, by pressing it downwards with a spatula, the apex of the tongue could be seen resting upon it behind. The tongue must have been pushed backwards by it, almost into the cavity of the pharynx, as was evident from the difficulty experienced in deglutition, as well as in respiration. Nothing but fluids could be introduced into the throat, and they were swallowed with the most imminent danger of suffocation. The family had been watching for several nights, with the hourly expectation of seeing her die, in some one of the strangling fits with which she was frequently afflicted.

In this state of things, it was, of course, decided, that nothing but an operation could save her life. As the glands of the throat did not appear to be affected, and as I was confident that I could execute the mechanical part of the operation without any immediate danger, I made no hesitation in undertaking the task. Accordingly, on the thirteenth of the same month, three days after my first visit to the patient, I performed the operation in the following manner:

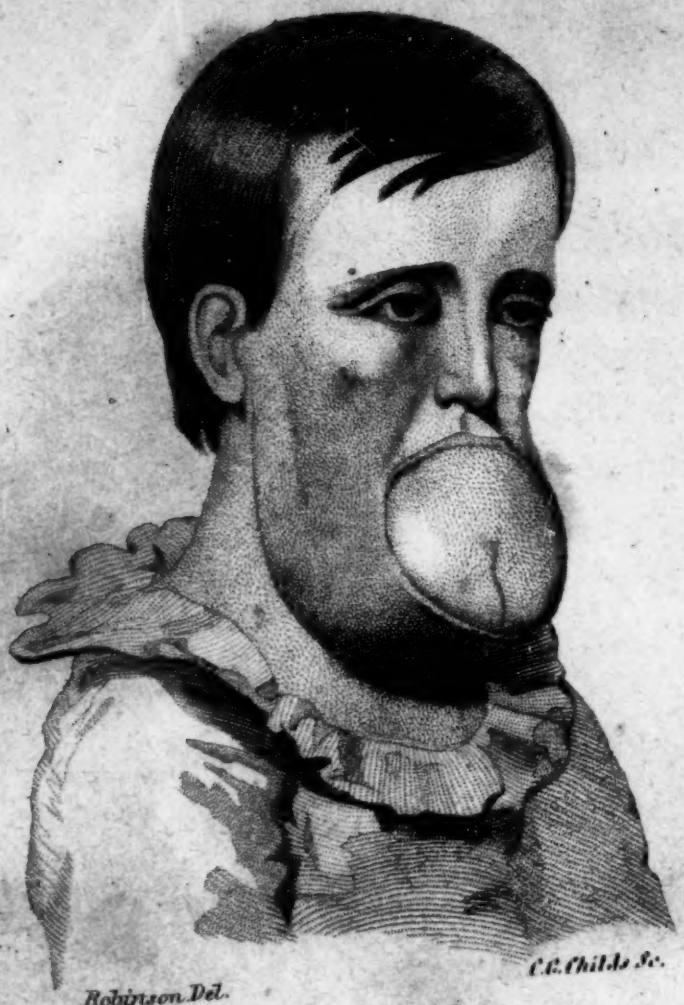
An incision was made through the integuments, from the left commissure of the lips, obliquely downwards and backwards, and carried over the anterior edge of the sternomastoid muscle, so as to command the carotid artery in case it should become necessary to secure it on that side. The anterior edge of this incision was next raised, and the low-

er part of the tumour exposed, until I ascertained that the carotid need not be interfered with. The integuments were then rapidly dissected forwards, until the whole surface of the tumour was exposed round to the opposite side. Though numerous arterial twigs were divided, I paid no attention to them; but proceeded at once to secure the facial artery on each side, just as it emerged from the sub-maxillary gland, beneath the jaw. As these supplied nearly all the divided twigs, the hæmorrhage immediately ceased. I next dissected up the insertions of the masseter muscles, a short distance behind the tumour, and exposed the surface of the sound bone, which was immediately afterwards divided on each side, by a metacarpal saw. The whole tumour was then turned outwards from the mouth, and carefully dissected from the under surface of the tongue, the sub-maxillary glands, and the muscles, on each side. A part of the sub-lingual glands, and a considerable portion of the left sub-maxillary, appearing to be tumefied and somewhat discoloured, I removed them altogether by the scalpel. Only three more arterial twigs, underneath the tongue, required the application of a ligature. Not more than six or eight ounces of blood were lost during the whole operation, which altogether occupied four minutes and a half. The little patient did not faint, although she was at first nearly suffocated by the blood which passed into her throat.

After the parts had been carefully inspected, and all present had agreed that no morbid structure was left behind, the huge flap, or rather pouch of skin, was re-applied to its former situation; and the edges of the external incision were retained in apposition by three interrupted sutures, and some adhesive plasters. The large cavity left beneath the tongue was partly filled with patent lint, bent into the shape of the lost circle of bone, upon which the pendulous integuments were afterwards lightly braced by means of a bandage.

After the dressing was completed, the tongue was discovered to be in its natural situation; and, to the great astonishment of all the family, the little sufferer began to articulate with considerable distinctness. She also called for water, and

Fig. 1.



Robinson Del. *C.G. Childs Sc.*

Fig. 2.

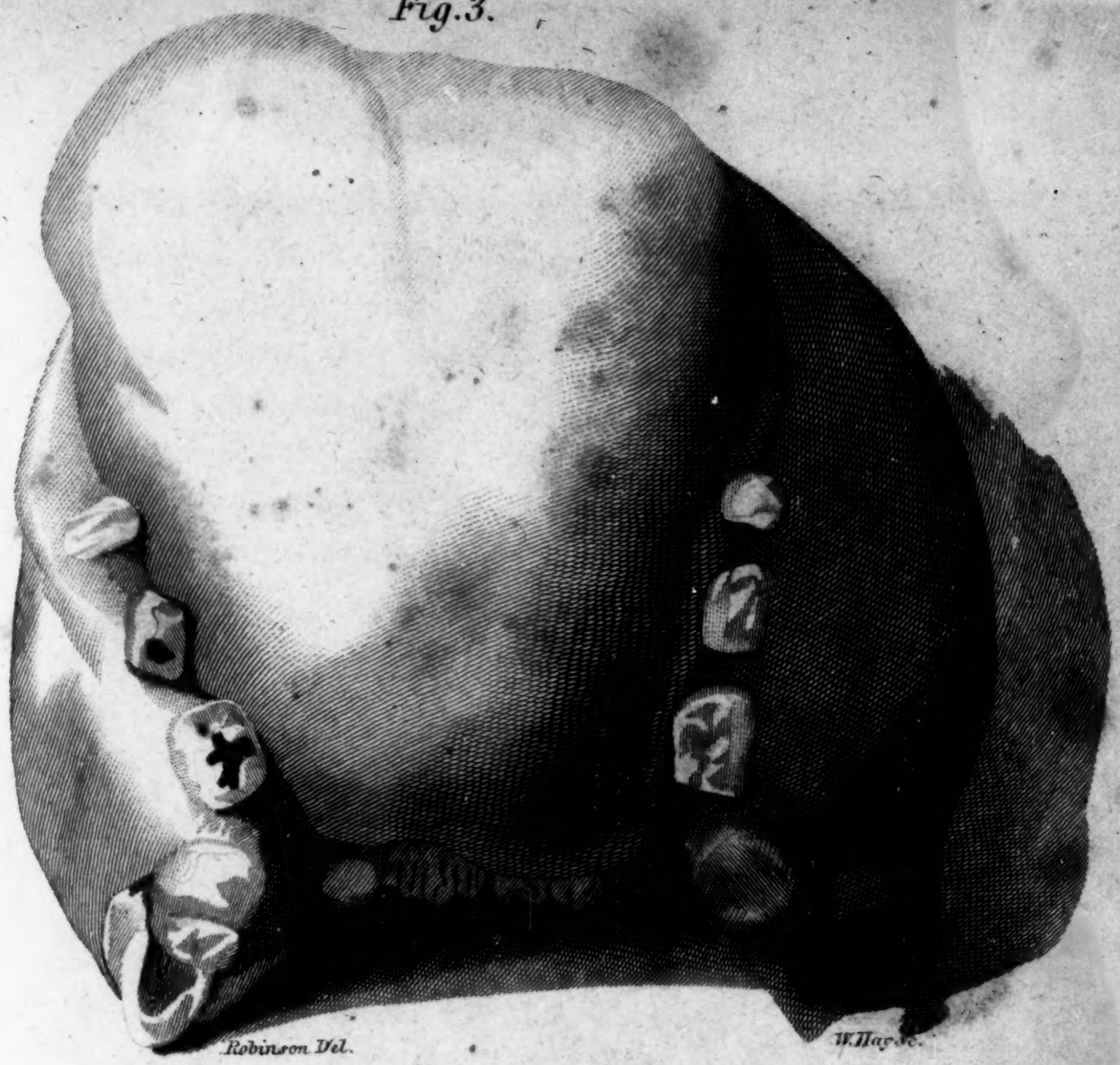
Robinson Del. *W. Hay Sc.*

Fig. 2

Fig.1.

Robinson Del. *W. Hay Sc.*

Fig.3.



Robinson Del. *W.Hay Sc.*

drank a moderate quantity from a common cup. Indeed, both the functions alluded to, which could hardly be considered as existing before the operation, began almost immediately afterwards to be executed with comparative ease.

But very little pain was experienced, and she slept soundly through the succeeding night. Her bowels were afterwards kept open by the daily use of injections; and she was nourished with broth and mucilaginous articles. When the dressings were removed on the fourth day, the external wound had become agglutinated by adhesive inflammation; and the cavity previously occupied by the tumour, was suppurating profusely. The mass of lint was, therefore, removed, and replaced by a fresh stuffing of the same material. Granulations soon afterwards sprouted up from the surfaces of the cavity, and displaced the internal dressing, which, on the seventh day, was altogether dispensed with. On the eighth day after the operation, she was taken across the Delaware in a boat, for the benefit of fresh air. In three weeks the parts were entirely cicatrized internally, as well as externally. During this period, a luxuriant crop of granulations shot out from the cut extremities of bone on each side, which finally became ossified to the distance of about one inch in front of the angles, and formed a solid support for the soft parts below the cheeks. The new flesh which had formed beneath the apex of the tongue, also became indurated into a ligamentous mass, which gave firmness to the integuments, and bolstered out the chin to its natural prominence. The induration of this ligamentous matter, like that which occurs between the fragments of a broken patella, eventually became so great as to answer the purpose of a substitute for the bone, in the place of which it was deposited. The muscles contracted adhesions to it; and she could easily masticate the common articles of food.

In less than five weeks after the operation, the child became robust and fleshy. She afterwards grew very rapidly in height, and went to school every day in good health and spirits. Her articulation became accurate; and her counte-

nance, to the surprise of all who visited her, presented its natural appearance. The only vestige of the operation, which could be discovered externally, was the linear cicatrix of the first incision extending from the left angle of the lips, obliquely downwards across the throat. There was, however, a transverse wrinkle underneath the prominence of the chin, which resulted from the contraction of the superabundant integuments. These are plainly exhibited in fig. 2., which was taken in the fourth month after the operation.

But, notwithstanding all these favourable circumstances, the final termination of her case was not happy. In four months after the operation, she contracted a severe cold, which was followed by fever. In two days after, the right sub-maxillary, and several of the neighbouring lymphatic glands, swelled enormously, and became slightly painful. Under suitable depletion, emollient applications, &c., this tumefaction speedily subsided, and the febrile symptoms disappeared. The sub-maxillary gland, however, remained in an indurated state, and the integuments of the chin began to assume a dry and corrugated appearance. Soon after, the internal surface of the cicatrix, beneath the tongue, contracted a yellowish-white colour; and the whole substance of the chin increased in thickness and density. These morbid appearances advanced with great rapidity. By the middle of January the tumefaction of the parts had acquired an enormous size, and the skin began to ulcerate externally. Deep fissures afterwards formed in the skin, which extended in various directions from the ulcerated surface, and revealed a dense white mass, of a cheesy or cartilaginous appearance, precisely like the substance of the tumour which had been removed by the operation. The latter stage of this horrid disease was still further marked by the formation of large sloughs, which penetrated through the whole thickness of the cheek, so as to expose the cavity of the mouth. Intolerable fœtor also attended, and emaciation, with extreme debility, rapidly conducted the patient to the close of her unhappy life. She expired on the twenty-second of March last, without having

suffered either severe pain, or loss of sleep, from the time of the operation, until a few days before her death.

On dissection, the following circumstances were disclosed: The heart was both enlarged in substance and exceedingly distended with blood. There were two small white cartilaginous incrustations on the surface of the ventricles. The pericardium was fully distended with a reddish serum. The lungs presented a singular appearance; about one-third of their exterior being perfectly white, while the remainder was of the usual colour. There were several small tubercles about the ramifications of the left bronchia, two of which were distinctly scrofulous. I could find no other appearance of disease in the viscera, except in the liver, which was studded in every part with white spots of the size of grains of wheat.

The third figure, engraved from an accurate drawing of the preparation, illustrates the size and form of the original tumour, together with all that portion of the bone which was amputated with it. The *cuspidati* and the *first molares*, are seen almost in their natural positions. The situation of the *third molar tooth* on each side, is shown distending the gum just before the transverse cut of the saw. The apparent enlargement of the bone is also shown on each side; as well as the form of the tumour which projected upwards into the mouth. Underneath its posterior extremity are seen the origins of the *genio-hyoidei, &c.* The two first figures are exact miniatures of the patient, taken before and after the operation. The high character of the artists by whom they were executed, precludes the necessity of any testimony respecting their correctness. It should be observed, however, that a remarkable precocity of growth, as well as of mind, gave to the child an appearance of much greater age than she had actually attained.

ANALECTA.

Radical Cure of Hernia by Bandages.—Professor Langenbeck cured Hernia effectually in six weeks, by compression: "I lay," says he, "a compress of linen against the *annulus*, and press it down firmly until the surface of the skin ulcerates. In this way a firm adhesion is effected in the ring, and the hernia is prevented from re-appearing."——

Froriep's Notizen, 3 *ter. B. p.* 304.

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New mode of treating Sarcocele, without extirpating the Testicle.—The difficulties and dangers attending the operation of castration, have often rendered a safer and less troublesome mode of cure desirable. M. Maunoir proposes a new method of proceeding in cases requiring the removal of a diseased testicle, which he has practised with success in two instances, and which appears to be preferable to castration. His mode of cure is founded on the interruption of the process of nutrition in the diseased part, by tying and dividing the spermatic artery. As soon as the testicle is brought into a state of atrophy, the process of disorganization, together with its attendant symptoms cease; and its volume diminishes to such a degree that castration becomes unnecessary.

Nouvelle methode traiter la Sarcocéle sans extirpation.—Geneve, 1821.

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Pyroligneous Acid, a useful application to phagedenic ulcers.—Dr. Schulze, of Calau, has derived much benefit from the application of this acid to indolent and plagedenic ulcers of the lower extremities. The acid is to be applied to the surface of the ulcer, with a hair pencil, once a day. The ulcer must be dressed with some gently stimulating ointment.

Rusts' Mag. XIII. 1.

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Tartar Emetic Ointment, in the Cure of Intermitting Fever.—Dr. V. Pommer, in *Hufeland's Journal for January*, 1823, has published some observations on the use of tartar emetic ointment, in the cure of intermitting fevers. He directed the ointment to be rubbed upon the abdomen, three times daily, until a crop of pustules appeared. The pustules were kept inflamed for several days, and the suppuration encouraged. Under this mode of treatment, quartans generally disappeared after the sixth paroxysm, quotidians after the second, and tertians after the third.

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The Sulphat of Quinine used in large doses.—It is stated in the first Number of the *Arch. Gen. de Medicine*, that Prof. Mathæis, of Rome, has begun to administer this salt in doses of four or five grains in a spoonful of water, three or four times a-day, during the intermissions and remissions of fever. He has found it necessary to give from fifteen to thirty-five grains at least, in two or three days, to arrest the progress of periodic fevers. In this country it has been given in smaller doses, and repeated at shorter intervals. We believe that from one-fourth to one grain has usually been administered every hour or two with success, in all such cases as are attended with complete intermissions. Like the bark from which it is prepared, it cannot be given with advantage except in a state of Apyrexia.

*** As we have already transgressed the limits which we originally prescribed for ourselves, we are obliged to defer the remainder of our Analecta for the next Number of this Journal.